



**CONESTOGA-ROVERS
& ASSOCIATES**

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April 16, 2010

Reference No. 034891

Mr. William J. Ryan
United States Environmental
Protection Agency, Region V
77 West Jackson Boulevard (SR-5J)
Chicago, Illinois 60604-3590

VIA E-MAIL
AND
U.S. MAIL

Dear Mr. Ryan:

Re: 2009-2010 Monitoring Report
Groundwater Monitoring Program
Evergreen Manor
Roscoe Township, Illinois

1.0 INTRODUCTION

Pursuant to the "Consent Decree for Remedial Action and Cost Recovery" executed by all parties by May 2008 and effective on February 26, 2009, Respondents agreed to implement the "Remedial Action (RA) Work Plan (Long Term Groundwater Monitoring Plan)", dated August 2007. In accordance with Section 9.0 of the RA Work Plan, this 2009-2010 Monitoring Report summarizes the 2009-2010 groundwater monitoring program at the Evergreen Manor Site located in Roscoe Township, Illinois. The RA Work Plan was incorporated as Appendix B to the Consent Decree.

Conestoga-Rovers & Associates (CRA) conducted four quarterly sampling events during the 2009-2010 reporting period: on May 22, 2009; August 20, 2009; December 3, 2009; and March 4, 2010. The quarterly sampling activities were performed in accordance with the RA Work Plan.

The five monitoring wells sampled in the groundwater monitoring program are MW-01A, MW-03, MW-103S, MW-106S, and MW-106D¹, the locations of which are presented on Figure 1. These five monitoring wells are the only wells still existing, as the remaining 19 monitoring wells were sealed in May 2009. Seventeen of the former monitoring wells were sealed by CRA on May 19 and 20, 2009. The other two monitoring wells, MW-105S and MW-105D, were destroyed by a local homeowner in early May 2009.²

¹ Consistent with U.S. EPA's May 20, 2009 approval, MW-106S and MW-106D are used in lieu of MW-105S and MW-105D for all monitoring events required by the Consent Decree/RA Work Plan.

² During the initial quarterly groundwater sampling event in May 2009, CRA could not locate monitoring wells MW-105S and MW-105D, and subsequently learned that the two wells were destroyed by a local homeowner in early May 2009 during an apparent landscaping project.



2.0 SUMMARY OF QUARTERLY GROUNDWATER SAMPLING ACTIVITIES

During each of the four quarterly sampling events, a groundwater sample was collected from each of the five monitoring wells. A comprehensive sample summary is provided in Table 1. Prior to sampling, the monitoring wells were purged using a stainless steel submersible pump and dedicated polyethylene tubing for each well. In order to remove all stagnant water and to minimize sediment agitation, CRA placed the pump near the tops of the water columns and purged the wells using slow purging/minimal drawdown techniques. A minimum of three standing well volumes of groundwater was removed from each well. The volume of standing water was calculated for 2-inch diameter monitoring wells as follows:

$$V = 0.16H$$

where:

V = volume of standing water in gallons

H = height of the water column in the well (feet)

Stabilization parameters consisting of pH, conductivity, temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity were measured following removal of each standing well volume and prior to sample collection. The turbidity was measured using a portable meter and the rest of the parameters were measured using a flow-through cell. Purging continued until the parameters stabilized and the turbidity of the water was lowered. A comprehensive summary of the purging activities is provided in Table 2. The water purged from the wells was placed on the ground surface at least 15 feet away from each monitoring well.

Once the measured parameters stabilized, a groundwater sample was collected using the same pump and tubing as for purging. The collected groundwater samples were shipped via overnight courier to the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica) of North Canton, Ohio, an accredited Illinois Environmental Accreditation Program (ILEAP) laboratory. TestAmerica analyzed the samples for the Target Compound List (TCL) of volatile organic compounds (VOCs). Quality Assurance/Quality Control (QA/QC) samples were also collected during each sampling event, consisting of one duplicate sample, one rinsate blank sample, one matrix spike/matrix spike duplicate (MS/MSD) sample, and a trip blank sample placed in the shipping cooler (Table 1).

Copies of the TestAmerica analytical reports for the four quarterly sampling events are provided in Attachment A. The analytical data for each sampling event were validated by a CRA chemist and were found to be acceptable and suitable for their intended use. Copies of the quarterly data validation reports are provided in Attachment B.



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3.0 ANALYTICAL RESULTS AND DISCUSSION

A summary of the detected groundwater analytical data for the four quarterly sampling events is provided in Table 3, and the quarterly data are presented graphically on Figure 2. Four VOCs were detected in the quarterly groundwater samples: cis-1,2-dichloroethene (cis-1,2-DCE); tetrachloroethene (PCE); 1,1,1-trichloroethane (1,1,1-TCA); and trichloroethene (TCE). None of the detected concentrations exceeded the applicable 'Cleanup Standards for Groundwater'.

The analytical data for the four quarterly sampling events are consistent with the results presented by the Remedial Design Report (CRA, 2006). A comprehensive summary of the historical VOC data for the five monitoring wells (and also for former wells MW-105S and MW-105D) is provided in Table 4. These data indicate that the 2002 sampling event was the last event in which marginal exceedences of the applicable cleanup standards were detected in any groundwater samples. The analytical data collected since 2005 continue to indicate the following: 1) a declining trend in the contaminant concentrations and, importantly, 2) that a groundwater plume and associated boundaries does not exist. Therefore, the data continue to document that the remedy is protective of human health and the environment.

4.0 RECOMMENDATIONS

In accordance with Section 9.0 of the RA Work Plan, two additional annual sampling events will be conducted, in the Fall of 2010 and the Fall of 2011, in order to complete three consecutive years of monitoring. The results of the Fall 2010 annual sampling event will be provided in a report to be submitted within 45 calendar days of the completion of the sampling event. Assuming the results of the two annual sampling events remain consistent with the previous events, i.e., all of the detected concentrations being below the applicable cleanup standards, the results of the Fall 2011 sampling event will be presented in a combined 'final certification and completion report' to be prepared in accordance with the requirements of the Consent Decree.

If you have any questions regarding the information presented in this annual report, please do not hesitate to contact me at (773) 380-9234.

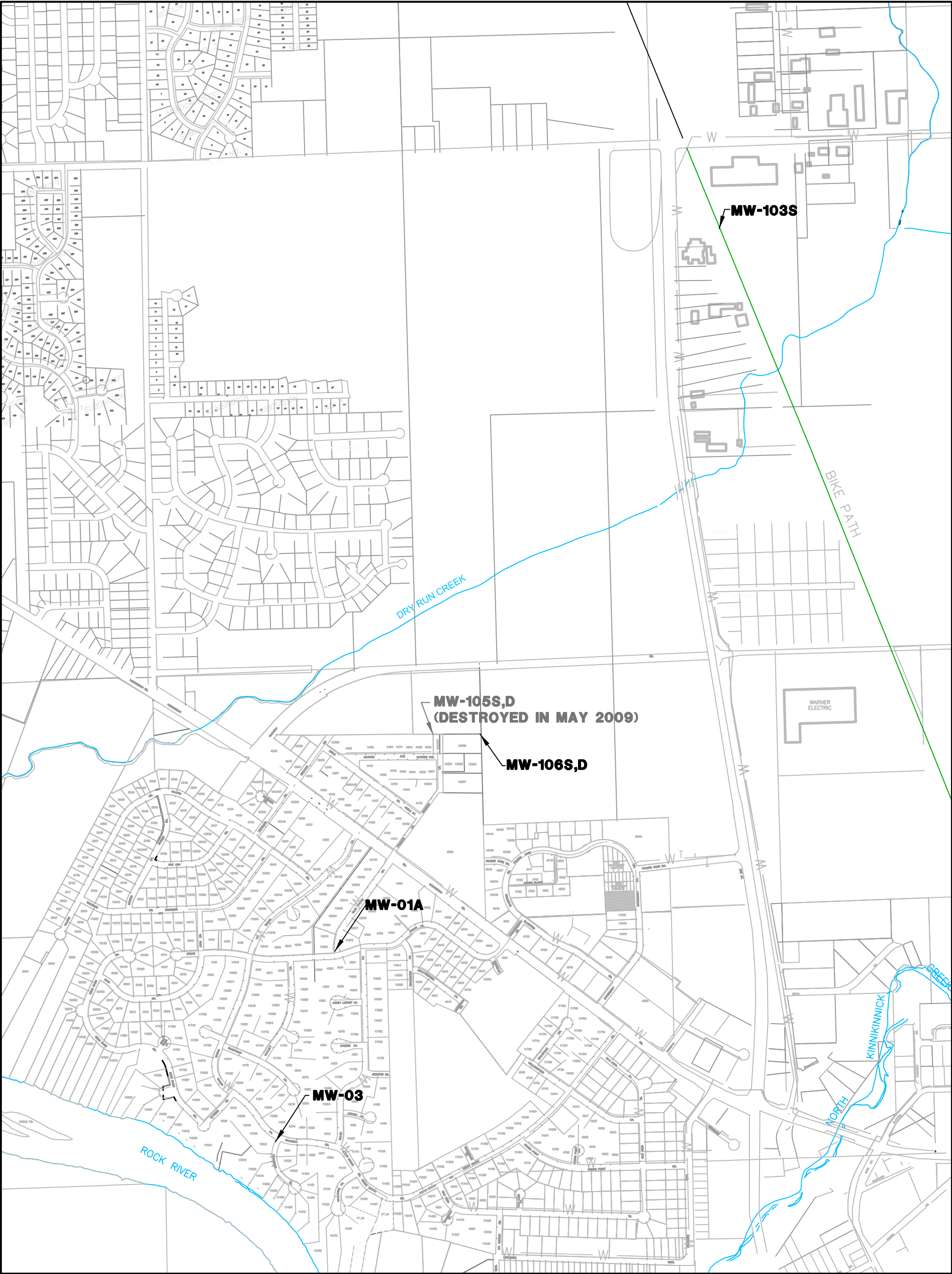
Yours truly,

CONESTOGA-ROVERS & ASSOCIATES


Bruce Clegg

BCC/ko/22

cc: Winnebago County Health Department
Winnebago County Regional Planning and Economic Development Department
Erin Rednour, Illinois EPA





NOTE:

MONITORING WELLS MW-106S AND MW-106D
HAVE REPLACED WELLS MW-105S AND MW-105D
IN THE GROUNDWATER MONITORING PROGRAM.

figure 1

MONITORING WELL LOCATIONS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
Roscoe Township, Illinois

**SAMPLE SUMMARY - 2009/2010 QUARTERLY SAMPLING EVENTS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>CRA Sample Number</i>	<i>Sample Matrix</i>	<i>Sample Location</i>	<i>QA/QC ¹</i>	<i>Date Collected</i>	<i>Analyses</i>
GW-052209-JK-050	Groundwater	MW-103S	MS/MSD ²	5/22/09	VOC ³
GW-052209-JK-051	Groundwater	MW-01A	--	5/22/09	VOC
GW-052209-JK-052	Lab Water	--	Rinsate Blank	5/22/09	VOC
GW-052209-JK-053	Groundwater	MW-106D	--	5/22/09	VOC
GW-052209-JK-054	Groundwater	MW-106S	--	5/22/09	VOC
GW-052209-JK-055	Groundwater	MW-03	--	5/22/09	VOC
GW-052209-JK-056	Groundwater	MW-03	Duplicate	5/22/09	VOC
GW-082009-JL-57	Groundwater	MW-103S	--	8/20/09	VOC
GW-082009-JL-58	Groundwater	MW-106S	--	8/20/09	VOC
GW-082009-JL-59	Groundwater	MW-106D	MS/MSD	8/20/09	VOC
GW-082009-JL-60	Lab Water	--	Rinsate Blank	8/20/09	VOC
GW-082009-JL-61	Groundwater	MW-01A	--	8/20/09	VOC
GW-082009-JL-62	Groundwater	MW-03	--	8/20/09	VOC
GW-082009-JL-63	Groundwater	MW-03	Duplicate	8/20/09	VOC
GW-120309-JK-64	Groundwater	MW-103S	--	12/3/09	VOC
GW-120309-JK-65	Groundwater	MW-106S	--	12/3/09	VOC
GW-120309-JK-66	Groundwater	MW-106D	MS/MSD	12/3/09	VOC
GW-120309-JK-67	Lab Water	--	Rinsate Blank	12/3/09	VOC
GW-120309-JK-68	Groundwater	MW-01A	--	12/3/09	VOC
GW-120309-JK-69	Groundwater	MW-03	--	12/3/09	VOC
GW-120309-JK-70	Groundwater	MW-03	Duplicate	12/3/09	VOC
GW-030410-JL-71	Groundwater	MW-103S	--	3/4/10	VOC
GW-030410-JL-72	Groundwater	MW-106D	MS/MSD	3/4/10	VOC
GW-030410-JL-73	Groundwater	MW-106S	--	3/4/10	VOC
GW-030410-JL-74	Lab Water	--	Rinsate Blank	3/4/10	VOC
GW-030410-JL-75	Groundwater	MW-01A	--	3/4/10	VOC
GW-030410-JL-76	Groundwater	MW-03	--	3/4/10	VOC
GW-030410-JL-77	Groundwater	MW-03	Duplicate	3/4/10	VOC

¹ QA/QC - Quality Assurance/Quality Control

² MS/MSD - Matrix Spike/Matrix Spike Duplicate

³ VOC - Volatile Organic Compounds

TABLE 2

**MONITORING WELL PURGING SUMMARY - 2009/2010 QUARTERLY SAMPLING
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Well Identifier</i>	<i>Date</i>	<i>Well Volume (gallons)</i>	<i>Volume Purged (gallons)</i>	<i>pH (Std. Units)</i>	<i>Conductivity (μS/cm)¹</i>	<i>Temperature (°C)</i>	<i>ORP² (mV)³</i>	<i>Dissolved Oxygen (mg/L)⁴</i>	<i>Turbidity (NTU)⁵</i>	<i>Observations</i>
MW-01A	5/22/09	4.7	10	6.61	735	12.0	35	4.90	4.0	Clear
			15	6.65	739	12.0	31	5.01	1.5	Clear
			20	6.69	740	12.0	31	5.05	0.7	Clear
			25	6.71	741	12.0	31	5.06	0.8	Clear
	8/20/09	4.3	5	7.10	871	12.9	133	5.15	4.5	Clear
			10	7.12	879	12.6	122	5.25	1.1	Clear
			15	7.14	880	12.8	117	5.33	0.9	Clear
			20	7.15	881	12.5	105	5.61	1.1	Clear
	12/3/09	4.2	5	7.32	832	11.3	90	5.67	0.5	Clear
			10	7.31	835	11.4	90	5.77	0.1	Clear
			15	7.31	838	11.4	90	5.78	0.1	Clear
	3/4/10	4.2	4.25	7.47	784	11.2	48	5.79	5.7	Clear
			8.5	7.43	785	11.4	49	5.81	0.7	Clear
			12.75	7.42	787	11.5	50	5.84	0.6	Clear

TABLE 2

**MONITORING WELL PURGING SUMMARY - 2009/2010 QUARTERLY SAMPLING
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Well Identifier</i>	<i>Date</i>	<i>Well Volume (gallons)</i>	<i>Volume Purged (gallons)</i>	<i>pH (Std. Units)</i>	<i>Conductivity (μS/cm)¹</i>	<i>Temperature (°C)</i>	<i>ORP² (mV)³</i>	<i>Dissolved Oxygen (mg/L)⁴</i>	<i>Turbidity (NTU)⁵</i>	<i>Observations</i>
MW-03	5/22/09	9.8	20	6.81	656	11.8	134	4.16	4.0	Clear
			30	6.85	658	11.8	129	4.17	1.2	Clear
			40	6.87	659	11.8	125	4.13	0.7	Clear
	8/20/09	9.3	10	6.90	740	12.6	97	3.30	12	Clear
			20	6.92	756	12.2	80	3.47	2.8	Clear
			30	6.95	761	12.3	72	3.54	0.8	Clear
			40	7.00	763	12.5	73	3.47	0.4	Clear
	12/3/09	9.4	10	7.37	749	11.1	87	3.77	0.3	Clear
			20	7.36	748	11.0	87	3.75	0.04	Clear
			30	7.36	749	11.0	89	3.75	0.1	Clear
	3/4/10	9.3	9.5	7.52	725	10.2	65	4.11	24	Slightly cloudy
			19	7.51	719	10.2	67	4.08	2	Clear
			28.5	7.47	720	10.2	68	4.07	0.4	Clear

TABLE 2

**MONITORING WELL PURGING SUMMARY - 2009/2010 QUARTERLY SAMPLING
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Well Identifier</i>	<i>Date</i>	<i>Well Volume (gallons)</i>	<i>Volume Purged (gallons)</i>	<i>pH (Std. Units)</i>	<i>Conductivity (µS/cm)¹</i>	<i>Temperature (°C)</i>	<i>ORP² (mV)³</i>	<i>Dissolved Oxygen (mg/L)⁴</i>	<i>Turbidity (NTU)⁵</i>	<i>Observations</i>
MW-103S	5/22/09	2.3	5	7.10	1,265	11.6	-4.3	9.70	2.2	Clear
			7.5	7.02	1,272	11.6	-3.9	9.51	0.7	Clear
			10	7.04	1,275	11.6	0.4	9.59	0.7	Clear
			12.5	7.01	1,273	11.6	2.7	9.72	0.6	Clear
			15	7.00	1,285	11.6	4.0	9.70	0.6	Clear
	8/20/09	2.2	2.5	6.74	1,179	11.8	180	7.54	8.4	Clear
			5	6.67	1,202	11.8	181	7.60	4.4	Clear
			7.5	7.15	1,243	11.8	170	7.37	1.3	Clear
			10	7.05	1,234	12.6	159	6.41	0.3	Clear
			12.5	7.34	1,235	12.6	146	5.71	0.3	Clear
			15	7.39	1,227	12.8	140	5.52	0.5	Clear
			17.5	7.40	1,241	12.9	142	5.61	1.0	Clear
	12/3/09	2.0	2	7.00	1,073	11.6	136	9.04	13	Clear
			4	7.03	1,098	11.6	121	8.88	3.9	Clear
			6	7.11	1,108	11.6	116	8.57	0.5	Clear
			8	7.13	1,103	11.6	115	8.29	0.3	Clear
			10	7.11	1,102	11.5	115	8.22	0.6	Clear
	3/4/10	2.0	2.25	7.16	1,179	11.7	81	9.50	47	Slightly cloudy
			5.5	7.17	1,187	11.7	82	9.38	7.3	Clear
			7.75	7.17	1,194	11.7	86	9.24	2.1	Clear
			10	7.18	1,195	11.7	88	9.19	2.2	Clear
			12.25	7.19	1,192	11.7	87	9.18	0.6	Clear

TABLE 2

**MONITORING WELL PURGING SUMMARY - 2009/2010 QUARTERLY SAMPLING
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Well Identifier</i>	<i>Date</i>	<i>Well Volume (gallons)</i>	<i>Volume Purged (gallons)</i>	<i>pH (Std. Units)</i>	<i>Conductivity (μS/cm)¹</i>	<i>Temperature (°C)</i>	<i>ORP² (mV)³</i>	<i>Dissolved Oxygen (mg/L)⁴</i>	<i>Turbidity (NTU)⁵</i>	<i>Observations</i>
MW-106S	5/22/09	6.0	12	6.99	744	12.1	108	7.26	2.6	Clear
			18	7.02	743	12.1	94	7.59	0.6	Clear
			24	7.05	743	12.1	98	7.65	0.2	Clear
			30	7.07	743	12.1	96	7.69	1.1	Clear
			36	7.10	743	12.1	94	7.71	0.6	Clear
	8/20/09	5.7	6	7.78	858	12.7	175	5.05	38	Clear
			12	6.81	864	12.5	143	5.80	9.6	Clear
			18	6.79	870	12.6	143	6.06	2.6	Clear
			24	6.88	870	12.5	137	6.19	0.9	Clear
	12/3/09	5.6	6	7.30	788	10.6	91	6.51	1.5	Clear
			12	7.31	792	10.5	91	6.52	0.4	Clear
			18	7.31	792	10.5	88	6.49	0.1	Clear
	3/4/10	5.5	6	7.59	719	11.5	64	7.17	54	Slightly cloudy
			12	7.47	717	11.4	68	7.15	3.4	Clear
			18	7.43	716	11.4	70	7.14	0.8	Clear
			24	7.41	716	11.4	71	7.13	0.4	Clear

TABLE 2

**MONITORING WELL PURGING SUMMARY - 2009/2010 QUARTERLY SAMPLING
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Well Identifier</i>	<i>Date</i>	<i>Well Volume (gallons)</i>	<i>Volume Purged (gallons)</i>	<i>pH (Std. Units)</i>	<i>Conductivity (μS/cm)¹</i>	<i>Temperature (°C)</i>	<i>ORP² (mV)³</i>	<i>Dissolved Oxygen (mg/L)⁴</i>	<i>Turbidity (NTU)⁵</i>	<i>Observations</i>
MW-106D	5/22/09	11.6	12	6.58	643	11.4	81	3.82	2.2	Clear
			24	6.52	644	11.3	77	3.73	0.5	Clear
			36	6.50	644	11.3	74	3.67	0.3	Clear
			48	6.47	644	11.4	69	3.64	0.1	Clear
			60	6.45	644	11.4	67	3.60	0.1	Clear
	8/20/09	11.4	12	7.04	750	12.9	95	3.26	3.5	Clear
			24	6.89	753	13.4	117	3.44	0.9	Clear
			36	7.11	754	13.5	114	3.33	0.5	Clear
			48	7.15	754	13.1	104	3.34	0.5	Clear
	12/3/09	11.2	12	7.41	745	10.2	87	3.94	0.1	Clear
			24	7.37	741	10.1	88	3.85	0.5	Clear
			36	7.35	743	10.2	88	3.85	0.2	Clear
	3/4/10	11.1	11.5	7.45	716	10.8	73	4.09	0.9	Clear
			23	7.39	717	10.8	78	4.10	0.1	Clear
			34.5	7.39	717	10.8	79	4.11	0.1	Clear

¹ μ S/cm - microsiemens per centimeter²ORP - oxidation/reduction potential³mV - millivolts⁴mg/L - milligrams per liter⁵NTU - nephelometric turbidity units

TABLE 3

SUMMARY OF DETECTED GROUNDWATER ANALYTICAL DATA
 2009/2010 QUARTERLY SAMPLING EVENTS
 GROUNDWATER MONITORING PROGRAM
 EVERGREEN MANOR SITE
 ROSCOE TOWNSHIP, ILLINOIS

<i>Sample Location</i>			<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>
<i>Sample Date</i>			<i>5/22/09</i>	<i>8/20/09</i>	<i>12/3/09</i>	<i>3/4/10</i>
<i>Sample Number</i>			<i>JK-051</i>	<i>JL-61</i>	<i>JK-68</i>	<i>JL-75</i>
<i>Parameter</i>	<i>Units</i> ¹	<i>Cleanup Standard</i> ²				
<i>Volatile Organic Compounds</i>						
cis-1,2-Dichloroethene	mg/L	0.07	ND(0.001) ³	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	mg/L	0.005	0.0027	0.0027	0.0023	0.0025
1,1,1-Trichloroethane	mg/L	0.2	0.0007 J ⁴	0.00059 J	0.00061 J	0.00058 J
Trichloroethene	mg/L	0.005	0.00094 J	0.0008 J	0.00084 J	0.00083 J

TABLE 3

**SUMMARY OF DETECTED GROUNDWATER ANALYTICAL DATA
2009/2010 QUARTERLY SAMPLING EVENTS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Sample Location</i>			<i>MW-03</i>	<i>MW-03</i>	<i>MW-03</i>	<i>MW-03</i>
<i>Sample Date</i>			<i>5/22/09</i>	<i>8/20/09</i>	<i>12/3/09</i>	<i>3/4/10</i>
<i>Sample Number</i>			<i>JK-055/056</i>	<i>JL-62/63</i>	<i>JK-69/70</i>	<i>JL-76/77</i>
<i>Parameter</i>	<i>Units</i> ¹	<i>Cleanup Standard</i> ²				
<i>Volatile Organic Compounds</i>						
cis-1,2-Dichloroethene	mg/L	0.07	ND(0.001)/ND(0.001)	ND(0.001)/ND(0.001)	0.00021 J/ND(0.001)	ND(0.001)/ND(0.001)
Tetrachloroethene	mg/L	0.005	0.00058 J/0.00059 J ⁵	0.00072 J/0.00075 J	0.00062 J/0.00063 J	0.00063 J/0.00065 J
1,1,1-Trichloroethane	mg/L	0.2	0.001/0.001	0.00089 J/0.001	0.00090 J/0.00092 J	0.00091 J/0.00089 J
Trichloroethene	mg/L	0.005	0.0023/0.0023	0.0023/0.0024	0.0022/0.0023	0.0021/0.0022

TABLE 3

**SUMMARY OF DETECTED GROUNDWATER ANALYTICAL DATA
2009/2010 QUARTERLY SAMPLING EVENTS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Sample Location</i>			<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>
<i>Sample Date</i>			<i>5/22/09</i>	<i>8/20/09</i>	<i>12/3/09</i>	<i>3/4/10</i>
<i>Sample Number</i>			<i>JK-050</i>	<i>JK-57</i>	<i>JK-64</i>	<i>JL-71</i>
<i>Parameter</i>	<i>Units</i> ¹	<i>Cleanup Standard</i> ²				
<i>Volatile Organic Compounds</i>						
cis-1,2-Dichloroethene	mg/L	0.07	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	mg/L	0.005	0.0028	0.0033	0.0028	0.0023
1,1,1-Trichloroethane	mg/L	0.2	0.00065 J	0.00069 J	0.00084 J	0.0016
Trichloroethene	mg/L	0.005	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)

TABLE 3

**SUMMARY OF DETECTED GROUNDWATER ANALYTICAL DATA
2009/2010 QUARTERLY SAMPLING EVENTS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Sample Location</i>			<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>
<i>Sample Date</i>			<i>5/22/09</i>	<i>8/20/09</i>	<i>12/3/09</i>	<i>3/4/10</i>
<i>Sample Number</i>			<i>JK-054</i>	<i>JL-58</i>	<i>JK-65</i>	<i>JL-73</i>
<i>Parameter</i>	<i>Units</i> ¹	<i>Cleanup Standard</i> ²				
<i>Volatile Organic Compounds</i>						
cis-1,2-Dichloroethene	mg/L	0.07	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	mg/L	0.005	0.00031 J	0.00038 J	0.00033 J	0.00037 J
1,1,1-Trichloroethane	mg/L	0.2	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trichloroethene	mg/L	0.005	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)

TABLE 3

**SUMMARY OF DETECTED GROUNDWATER ANALYTICAL DATA
2009/2010 QUARTERLY SAMPLING EVENTS
GROUNDWATER MONITORING PROGRAM
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

<i>Sample Location</i>			<i>MW-106D</i>	<i>MW-106D</i>	<i>MW-106D</i>	<i>MW-106D</i>
<i>Sample Date</i>			<i>5/22/09</i>	<i>8/20/09</i>	<i>12/3/09</i>	<i>3/4/10</i>
<i>Sample Number</i>			<i>JK-053</i>	<i>JL-59</i>	<i>JK-66</i>	<i>JL-72</i>
<i>Parameter</i>	<i>Units</i> ¹	<i>Cleanup Standard</i> ²				
<i>Volatile Organic Compounds</i>						
cis-1,2-Dichloroethene	mg/L	0.07	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Tetrachloroethene	mg/L	0.005	0.00031 J	0.00031 J	0.00031 J	ND(0.001)
1,1,1-Trichloroethane	mg/L	0.2	0.00033 J	0.00034 J	0.00034 J	0.00029 J
Trichloroethene	mg/L	0.005	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)

¹ Units as indicated in milligrams per liter (mg/L)

² Taken from Table 1 of the September 2004 "Statement of Work for Remedial Design of the Remedial Action".

³ ND() - not detected at the quantitation limit stated in parentheses

⁴ J - estimated value

⁵ Sample result/Duplicate sample result

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>	<i>MW-01A</i>
Sample ID:			<i>EM2-GMW1A-01/01DP</i>	<i>GW-052605-JK-026</i>	<i>GW-052209-JK-051</i>	<i>GW-082009-JL-61</i>	<i>GW-120309-JK-68</i>	<i>GW-030410-JL-75</i>
Sample Date:			<i>4/16/2002</i>	<i>5/26/2005</i>	<i>5/22/2009</i>	<i>8/20/2009</i>	<i>12/3/2009</i>	<i>3/4/2010</i>
	<i>Units</i>	<i>Cleanup Standard¹</i>						
<i>Volatile Organic Compounds</i>								
1,1,1-Trichloroethane	ug/L ²	200	2.4/2 ⁴	1.6	0.70 J ⁵	0.59 J	0.61 J	0.58 J
1,1-Dichloroethane	ug/L	NE ³	0.34 J/0.34 J	ND(1.0) ⁶	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	0.19 J/0.16 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	1.5/1.4	0.45 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	1.7/1.7	2.3	2.7	2.7	2.3	2.5
Trichloroethene	ug/L	5	4.7/4.4	2.8	0.94 J	0.80 J	0.84 J	0.83 J
Trifluorotrichloroethane (Freon 113)	ug/L	NE	ND(0.5)/ND(0.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-03	MW-03	MW-03	MW-03	MW-03	MW-03
Sample ID:			EM2-GMW3-01	GW-052605-JK-024/025	GW-052209-JK-055/056	GW-082009-JL-62/63	GW-120309-JK-69/70	GW-030410-JL-76/77
Sample Date:			4/16/2002	5/26/2005	5/22/2009	8/20/2009	12/3/2009	3/4/2010
		<i>Cleanup</i>						
	<i>Units</i>	<i>Standard¹</i>						
<i>Volatile Organic Compounds</i>								
1,1,1-Trichloroethane	ug/L ²	200	2.1	1.8/1.8	1.0/1.0	0.89 J/1.0	0.90 J/0.92 J	0.91 J/0.89 J
1,1-Dichloroethane	ug/L	NE ³	0.26 J	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)
1,1-Dichloroethene	ug/L	7	0.2 J	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	1.1	0.62 J/0.65 J	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	0.21 J/ND(1.0)	ND(1.0)/ND(1.0)
Tetrachloroethene	ug/L	5	0.1 J	0.29 J/0.25 J	0.58 J/0.59 J	0.72 J/0.75 J	0.62 J/0.63 J	0.63 J/0.65 J
Trichloroethene	ug/L	5	<u>7.2 J</u>	4.6/4.8	2.3/2.3	2.3/2.4	2.2/2.3	2.1/2.2
Trifluorotrichloroethane (Freon 113)	ug/L	NE	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-103S</i>
Sample ID:			<i>G103S</i>	<i>G103S</i>	<i>G103S</i>	<i>MW103S</i>	<i>EM2-G103S-01</i>	<i>GW-052305-JK-004/005</i>	<i>GW-052209-JK-050</i>	<i>GW-082009-JL-57</i>
Sample Date:			<i>3/23/1994</i>	<i>2/21/1995</i>	<i>12/1/1996</i>	<i>5/31/2000</i>	<i>4/8/2002</i>	<i>5/23/2005</i>	<i>5/22/2009</i>	<i>8/20/2009</i>
		<i>Cleanup</i>								
	<i>Units</i>	<i>Standard¹</i>								
<i>Volatile Organic Compounds</i>										
1,1,1-Trichloroethane	ug/L ²	200	5.7	3.0	1.5	ND(2)	0.63	0.42 J/0.33 J	0.65 J	0.69 J
1,1-Dichloroethane	ug/L	NE ³	ND	ND	ND	ND(1)	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND	ND	ND	ND(1)	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND	ND	ND	ND(4)	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	<u>17.0</u>	<u>43 J</u>	<u>8.4</u>	<u>9 J</u>	<u>5.9</u>	0.94 J/0.80 J	2.8	3.3
Trichloroethene	ug/L	5	ND	ND	ND	ND(1)	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	NE	--	--	--	2 J	ND(0.5)	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			<i>MW-103S</i>	<i>MW-103S</i>	<i>MW-105S</i>	<i>MW-105S</i>	<i>MW-105S</i>	<i>MW-105S</i>	<i>MW-105S</i>
Sample ID:			<i>GW-120309-JK-64</i>	<i>GW-030410-JL-71</i>	<i>MW-105S</i>	<i>MW-105S</i>	<i>MW105S</i>	<i>EM2-G105S-01/01DP</i>	<i>GW-052505-JK-018</i>
Sample Date:			<i>12/3/2009</i>	<i>3/4/2010</i>	<i>3/23/1994</i>	<i>2/22/1995</i>	<i>6/2/2000</i>	<i>4/8/2002</i>	<i>5/25/2005</i>
	<i>Units</i>	<i>Cleanup Standard¹</i>							
<i>Volatile Organic Compounds</i>									
1,1,1-Trichloroethane	ug/L ²	200	0.84 J	1.6	7.5	6.0	2 J	1.9/1.8	1.2
1,1-Dichloroethane	ug/L	NE ³	ND(1.0)	ND(1.0)	0.7	0.7	ND(1)	0.21 J/0.19 J	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)	ND(1.0)	--	0.8	ND(1)	ND(0.5)/ND(0.5)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	ND(1.0)	4.7	4.0	1 J	0.47 J/0.39 J	ND(1.0)
Tetrachloroethene	ug/L	5	2.8	2.3	4.1	<u>6.0</u>	3 J	3.5/3.1	3.2
Trichloroethene	ug/L	5	ND(1.0)	ND(1.0)	<u>14</u>	<u>14</u>	2 J	1.7/1.6	0.82 J
Trifluorotrichloroethane (Freon 113)	ug/L	NE	ND(1.0)	ND(1.0)	--	--	ND(2) UJ ⁷	ND(0.5)/ND(0.5)	ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			<i>MW-105D</i>	<i>MW-105D</i>	<i>MW-105D</i>	<i>MW-105D</i>	<i>MW-105D</i>	<i>MW-105D</i>
Sample ID:			<i>MW-105D</i>	<i>MW-105D</i>	<i>MW105D</i>	<i>MW105D-01</i>	<i>EM2-G105D-01</i>	<i>GW-052505-JK-019</i>
Sample Date:			<i>3/23/1994</i>	<i>2/22/1995</i>	<i>6/2/2000</i>	<i>6/2/2000</i>	<i>4/8/2002</i>	<i>5/25/2005</i>
	<i>Units</i>	<i>Cleanup Standard¹</i>						
<i>Volatile Organic Compounds</i>								
1,1,1-Trichloroethane	ug/L ²	200	8.9	9.0	2 J	3	2.2	1.4
1,1-Dichloroethane	ug/L	NE ³	1.1	1.0	ND(1)	ND(1)	0.39 J	ND(1.0)
1,1-Dichloroethene	ug/L	7	--	1.0	ND(1)	ND(1)	ND(0.5)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	5.7	5.0	1 J	2	1.3	ND(1.0)
Tetrachloroethene	ug/L	5	3.2	4.0	3 J	4	3.2	3.0
Trichloroethene	ug/L	5	<u>15</u>	<u>14</u>	2 J	3	2.8	0.94 J
Trifluorotrichloroethane (Freon 113)	ug/L	NE	--	--	ND(2) UJ	--	ND(0.5)	ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>
Sample ID:			<i>MW-106S</i>	<i>MW-106S</i>	<i>GW-052505-JK-020</i>	<i>GW-052209-JK-054</i>	<i>GW-082009-JL-58</i>	<i>GW-120309-JK-65</i>	<i>GW-030410-JL-73</i>
Sample Date:			<i>3/24/1994</i>	<i>2/22/1995</i>	<i>5/25/2005</i>	<i>5/22/2009</i>	<i>8/20/2009</i>	<i>12/3/2009</i>	<i>3/4/2010</i>
		<i>Cleanup</i>							
	<i>Units</i>	<i>Standard¹</i>							
<i>Volatile Organic Compounds</i>									
1,1,1-Trichloroethane	ug/L ²	200	1.0	8.8	0.21 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	NE ³	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	0.2	ND	0.48 J	0.31 J	0.38 J	0.33 J	0.37 J
Trichloroethene	ug/L	5	2.9	3.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	NE	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 4

**DETECTED GROUNDWATER ANALYTICAL DATA - SELECT WELLS
EVERGREEN MANOR
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-106D	MW-106D	MW-106D	MW-106D	MW-106D	MW-106D	MW-106D
Sample ID:			MW-106D	MW-106D	GW-052505-JK-021	GW-052209-JK-053	GW-082009-JL-59	GW-120309-JK-66	GW-030410-JL-72
Sample Date:			3/24/1994	2/22/1995	5/25/2005	5/22/2009	8/20/2009	12/3/2009	3/4/2010
		Cleanup							
	Units	Standard ¹							
Volatile Organic Compounds									
1,1,1-Trichloroethane	ug/L ²	200	2.0	--	0.57 J	0.33 J	0.34 J	0.34 J	0.29 J
1,1-Dichloroethane	ug/L	NE ³	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	--	0.6 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	ND	0.4 J	0.40 J	0.31 J	0.31 J	0.31 J	ND(1.0)
Trichloroethene	ug/L	5	2.5	3.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (Freon 113)	ug/L	NE	--	--	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Bold and underlined indicates an exceedence of the applicable cleanup standard.

¹ Taken from Table 1 of the September 2004 "Statement of Work for Remedial Design of the Remedial Action".

² ug/L - micrograms per liter

³ NE - Not established

⁴ Sample result/Duplicate sample result

⁵ J - estimated value

⁶ ND() - not detected above the quantitation limit stated in parentheses

⁷ UJ - estimated quantitation limit

ATTACHMENT A

TESTAMERICA LABORATORY ANALYTICAL REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 34891

EVERGREEN MANOR

Lot #: A9E230162

Dave Hendren

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TESTAMERICA LABORATORIES, INC.

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Approved for release.
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Project Manager
6/9/2009 4:17 PM

June 9, 2009



CASE NARRATIVE

A9E230162

The following report contains the analytical results for seven water samples and one quality control sample submitted to TestAmerica North Canton by Conestoga-Rovers & Associates, Inc. from the Evergreen Manor Site, project number 34891. The samples were received May 23, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dave Hendren on June 05, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 3.2°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),

Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit

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EXECUTIVE SUMMARY - Detection Highlights

A9E230162

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-052209-JK-050 05/22/09 09:20 001				
Tetrachloroethene	2.8	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.65 J	1.0	ug/L	SW846 8260B
GW-052209-JK-051 05/22/09 10:20 002				
Methylcyclohexane	0.57 J,B	1.0	ug/L	SW846 8260B
Tetrachloroethene	2.7	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.70 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.94 J	1.0	ug/L	SW846 8260B
GW-052209-JK-052 05/22/09 10:30 003				
Styrene	0.41 J	1.0	ug/L	SW846 8260B
GW-052209-JK-053 05/22/09 13:10 004				
Tetrachloroethene	0.31 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.33 J	1.0	ug/L	SW846 8260B
GW-052209-JK-054 05/22/09 14:00 005				
Tetrachloroethene	0.31 J	1.0	ug/L	SW846 8260B
GW-052209-JK-055 05/22/09 15:10 006				
Tetrachloroethene	0.58 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.0	1.0	ug/L	SW846 8260B
Trichloroethene	2.3	1.0	ug/L	SW846 8260B
GW-052209-JK-056 05/22/09 15:15 007				
Tetrachloroethene	0.59 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.0	1.0	ug/L	SW846 8260B
Trichloroethene	2.3	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A9E230162

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9E230162

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LDNFH	001	GW-052209-JK-050	05/22/09	09:20
LDNFJ	002	GW-052209-JK-051	05/22/09	10:20
LDNFM	003	GW-052209-JK-052	05/22/09	10:30
LDNFN	004	GW-052209-JK-053	05/22/09	13:10
LDNFQ	005	GW-052209-JK-054	05/22/09	14:00
LDNFR	006	GW-052209-JK-055	05/22/09	15:10
LDNFT	007	GW-052209-JK-056	05/22/09	15:15
LDNFV	008	TRIP BLANK	05/22/09	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-050

GC/MS Volatiles

Lot-Sample #...: A9E230162-001 Work Order #...: LDNFH1AA Matrix.....: WG
 Date Sampled...: 05/22/09 09:20 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-050

GC/MS Volatiles

Lot-Sample #...: A9E230162-001 Work Order #...: LDNFH1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Tetrachloroethene	2.8	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.65 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	93	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-051

GC/MS Volatiles

Lot-Sample #...: A9E230162-002 Work Order #...: LDNFJ1AA Matrix.....: WG
 Date Sampled...: 05/22/09 10:20 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	0.57 J,B	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-051

GC/MS Volatiles

Lot-Sample #...: A9E230162-002 Work Order #...: LDNFJ1AA Matrix.....: WG

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Tetrachloroethene	2.7	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.70 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.94 J	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>		<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Dibromofluoromethane	98	(73 - 122)	
1,2-Dichloroethane-d4	96	(61 - 128)	
Toluene-d8	97	(76 - 110)	
4-Bromofluorobenzene	78	(74 - 116)	

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-052

GC/MS Volatiles

Lot-Sample #...: A9E230162-003 Work Order #...: LDNFM1AA Matrix.....: WG
 Date Sampled...: 05/22/09 10:30 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	0.41 J	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-052

GC/MS Volatiles

Lot-Sample #...: A9E230162-003 Work Order #...: LDNFM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-053

GC/MS Volatiles

Lot-Sample #...: A9E230162-004 Work Order #...: LDNFN1AA Matrix.....: WG
 Date Sampled...: 05/22/09 13:10 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-053

GC/MS Volatiles

Lot-Sample #...: A9E230162-004 Work Order #...: LDNFN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.31 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.33 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	98	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-054

GC/MS Volatiles

Lot-Sample #....: A9E230162-005 Work Order #....: LDNFQ1AA Matrix.....: WG
 Date Sampled....: 05/22/09 14:00 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #....: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-054

GC/MS Volatiles

Lot-Sample #...: A9E230162-005 Work Order #...: LDNFQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.31 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	96	(76 - 110)
4-Bromofluorobenzene	75	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-055

GC/MS Volatiles

Lot-Sample #....: A9E230162-006 Work Order #....: LDNFR1AA Matrix.....: WG
 Date Sampled....: 05/22/09 15:10 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #....: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-055

GC/MS Volatiles

Lot-Sample #...: A9E230162-006 Work Order #...: LDNFR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.58 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	1.0	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.3	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	106	(73 - 122)	
1,2-Dichloroethane-d4	100	(61 - 128)	
Toluene-d8	96	(76 - 110)	
4-Bromofluorobenzene	77	(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-056

GC/MS Volatiles

Lot-Sample #...: A9E230162-007 Work Order #...: LDNFT1AA Matrix.....: WG
 Date Sampled...: 05/22/09 15:15 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-052209-JK-056

GC/MS Volatiles

Lot-Sample #...: A9E230162-007 Work Order #...: LDNFT1AA Matrix.....: WG

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Tetrachloroethene	0.59 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	1.0	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.3	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	95	(76 - 110)
4-Bromofluorobenzene	76	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A9E230162-008 Work Order #...: LDNFV1AA Matrix.....: WQ
 Date Sampled...: 05/22/09 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A9E230162-008 Work Order #...: LDNFV1AA Matrix.....: WQ

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	107	(73 - 122)
1,2-Dichloroethane-d4	102	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E230162
 MB Lot-Sample #: A9F030000-464

Work Order #...: LD9EH1AA

Matrix.....: WATER

Prep Date.....: 06/02/09

Analysis Date...: 06/02/09

Prep Batch #...: 9154464

Dilution Factor: 1

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	10	ug/L		SW846 8260B
Benzene	ND	1.0	ug/L		SW846 8260B
Bromodichloromethane	ND	1.0	ug/L		SW846 8260B
Bromoform	ND	1.0	ug/L		SW846 8260B
Bromomethane	ND	1.0	ug/L		SW846 8260B
2-Butanone	ND	10	ug/L		SW846 8260B
Carbon disulfide	ND	1.0	ug/L		SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L		SW846 8260B
Chlorobenzene	ND	1.0	ug/L		SW846 8260B
Chloroethane	ND	1.0	ug/L		SW846 8260B
Chloroform	ND	1.0	ug/L		SW846 8260B
Chloromethane	ND	1.0	ug/L		SW846 8260B
Cyclohexane	ND	1.0	ug/L		SW846 8260B
Dibromochloromethane	ND	1.0	ug/L		SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L		SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L		SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L		SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L		SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L		SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L		SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L		SW846 8260B
Ethylbenzene	ND	1.0	ug/L		SW846 8260B
2-Hexanone	ND	10	ug/L		SW846 8260B
Isopropylbenzene	ND	1.0	ug/L		SW846 8260B
Methyl acetate	ND	10	ug/L		SW846 8260B
Methylene chloride	0.49 J	1.0	ug/L		SW846 8260B
Methylcyclohexane	0.57 J	1.0	ug/L		SW846 8260B
4-Methyl-2-pentanone	ND	10	ug/L		SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L		SW846 8260B
Styrene	ND	1.0	ug/L		SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L		SW846 8260B
Tetrachloroethene	ND	1.0	ug/L		SW846 8260B
Toluene	ND	1.0	ug/L		SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9E230162

Work Order #...: LD9EH1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>			<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>		
1,2,4-Trichloro- benzene	ND	1.0	ug/L		SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L		SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L		SW846 8260B
Trichloroethene	ND	1.0	ug/L		SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L		SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L		SW846 8260B
Vinyl chloride	ND	1.0	ug/L		SW846 8260B
Xylenes (total)	ND	2.0	ug/L		SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	93	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E230162 Work Order #...: LD9EH1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A9F030000-464 LD9EH1AD-LCSD
 Prep Date.....: 06/02/09 Analysis Date...: 06/02/09
 Prep Batch #...: 9154464
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	93	(80 - 116)			SW846 8260B
	92	(80 - 116)	1.6	(0-20)	SW846 8260B
Chlorobenzene	102	(76 - 117)			SW846 8260B
	100	(76 - 117)	2.2	(0-20)	SW846 8260B
1,1-Dichloroethene	91	(63 - 130)			SW846 8260B
	91	(63 - 130)	0.62	(0-20)	SW846 8260B
Toluene	103	(74 - 119)			SW846 8260B
	102	(74 - 119)	1.8	(0-20)	SW846 8260B
Trichloroethene	92	(75 - 122)			SW846 8260B
	91	(75 - 122)	0.88	(0-20)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	97	(73 - 122)
	93	(73 - 122)
1,2-Dichloroethane-d4	88	(61 - 128)
	86	(61 - 128)
Toluene-d8	105	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	108	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9E230162 Work Order #...: LDNFH1AC-MS Matrix.....: WG
 MS Lot-Sample #: A9E230162-001 LDNFH1AD-MSD
 Date Sampled...: 05/22/09 09:20 Date Received...: 05/23/09
 Prep Date.....: 06/03/09 Analysis Date...: 06/03/09
 Prep Batch #...: 9154464
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	90	(78 - 118)			SW846 8260B
	89	(78 - 118)	1.2	(0-20)	SW846 8260B
Chlorobenzene	99	(76 - 117)			SW846 8260B
	99	(76 - 117)	0.42	(0-20)	SW846 8260B
1,1-Dichloroethene	86	(62 - 130)			SW846 8260B
	86	(62 - 130)	0.69	(0-20)	SW846 8260B
Toluene	100	(70 - 119)			SW846 8260B
	101	(70 - 119)	1.0	(0-20)	SW846 8260B
Trichloroethene	87	(62 - 130)			SW846 8260B
	90	(62 - 130)	3.0	(0-20)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	97	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	91	(61 - 128)
	88	(61 - 128)
Toluene-d8	105	(76 - 110)
	103	(76 - 110)
4-Bromofluorobenzene	108	(74 - 116)
	106	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters



8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CONESTOGA-ROVERS & ASSOCIATES

SHIPPED TO
(Laboratory Name):

Test America - North Canton

REFERENCE NUMBER:

034891

PROJECT NAME:

Evergreen Manor

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: *Lisa Punch* PRINTED NAME: Lisa Punch

PARAMETERS

No. OF CONTAINERS

REMARKS

SAMPLE IDENTIFICATION No.

SAMPLE MATRIX

9

X

VOCs

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ns/mb

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9

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VOCs

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TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A9E2301162

Client C22A Project _____ By: [Signature]

Cooler Received on 5-23-09 Opened on 5-23-09 (Signature)

FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____

TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒

If YES, Quantity _____ Quantity Unsalvageable _____

Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒

Were custody seals on the bottle(s)? Yes ☐ No ☒

If YES, are there any exceptions? _____

2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐

3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐

4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐

5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____

6. Cooler temperature upon receipt 3.2 °C See back of form for multiple coolers/temps ☐

METHOD: IR ☒ Other ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐

8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐

9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒

10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐

11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☐

12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample

Receiving to meet recommended pH level(s). Nitric Acid Lot# 031909-HNO₃; Sulfuric Acid Lot# 100108-H₂SO₄; Sodium

Hydroxide Lot# 073007 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-

(CH₃COO)₂ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

Discrepancies Cont'd:

END OF REPORT

RECEIVED

SEP 09 2009

CRA INC.
CHICAGO

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

PROJECT NO. 34891

EVERGREEN MANOR

Lot #: A9H210223

Dave Hendren

Conestoga-Rovers & Associates
8615 W. Bryn Mawr
Chicago, IL 60631

TESTAMERICA LABORATORIES, INC.



Alesia M. Danford
Project Manager
alesia.danford@testamericainc.com

Approved for release.
Alesia M. Danford
Project Manager
9/4/2009 11:20 AM

September 3, 2009



CASE NARRATIVE

A9H210223

The following report contains the analytical results for seven water samples and one quality control sample submitted to TestAmerica North Canton by Conestoga-Rovers & Associates, Inc. from the Evergreen Manor Site, project number 34891. The samples were received August 21, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Dave Hendren on September 02, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Alesia M. Danford, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.9°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),

Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit



EXECUTIVE SUMMARY - Detection Highlights

A9H210223

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-082009-JL-57 08/20/09 10:30 001				
Tetrachloroethene	3.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.69 J	1.0	ug/L	SW846 8260B
GW-082009-JL-58 08/20/09 11:55 002				
Tetrachloroethene	0.38 J	1.0	ug/L	SW846 8260B
GW-082009-JL-59 08/20/09 13:25 003				
Tetrachloroethene	0.31 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.34 J	1.0	ug/L	SW846 8260B
GW-082009-JL-60 08/20/09 13:35 004				
Methylene chloride	0.33 J,B	1.0	ug/L	SW846 8260B
GW-082009-JL-61 08/20/09 15:40 005				
Tetrachloroethene	2.7	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.59 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.80 J	1.0	ug/L	SW846 8260B
GW-082009-JL-62 08/20/09 16:55 006				
Tetrachloroethene	0.72 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.89 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.3	1.0	ug/L	SW846 8260B
GW-082009-JL-63 08/20/09 17:00 007				
Tetrachloroethene	0.75 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.0	1.0	ug/L	SW846 8260B
Trichloroethene	2.4	1.0	ug/L	SW846 8260B
TRIPBLANK 08/20/09 008				
Acetone	2.4 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A9H210223

PARAMETER	ANALYTICAL METHOD
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9H210223

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LJKHA	001	GW-082009-JL-57	08/20/09	10:30
LJKHF	002	GW-082009-JL-58	08/20/09	11:55
LJKHJ	003	GW-082009-JL-59	08/20/09	13:25
LJKHM	004	GW-082009-JL-60	08/20/09	13:35
LJKHP	005	GW-082009-JL-61	08/20/09	15:40
LJKHT	006	GW-082009-JL-62	08/20/09	16:55
LJKHW	007	GW-082009-JL-63	08/20/09	17:00
LJKH1	008	TRIPBLANK	08/20/09	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-57

GC/MS Volatiles

Lot-Sample #....: A9H210223-001 Work Order #....: LJKHA1AA Matrix.....: WG
 Date Sampled....: 08/20/09 10:30 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-57

GC/MS Volatiles

Lot-Sample #...: A9H210223-001 Work Order #...: LJKHA1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	3.3	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.69 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	95	(73 - 122)	
1,2-Dichloroethane-d4	94	(61 - 128)	
Toluene-d8	89	(76 - 110)	
4-Bromofluorobenzene	86	(74 - 116)	

NOTE (S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-58

GC/MS Volatiles

Lot-Sample #....: A9H210223-002 Work Order #....: LJKHF1AA Matrix.....: WG
 Date Sampled....: 08/20/09 11:55 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-58

GC/MS Volatiles

Lot-Sample #...: A9H210223-002 Work Order #...: LJKHF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.38 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	92	(73 - 122)	
1,2-Dichloroethane-d4	94	(61 - 128)	
Toluene-d8	90	(76 - 110)	
4-Bromofluorobenzene	83	(74 - 116)	

NOTE (S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-59

GC/MS Volatiles

Lot-Sample #....: A9H210223-003 Work Order #....: LJKHJ1AA Matrix.....: WG
 Date Sampled...: 08/20/09 13:25 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-59

GC/MS Volatiles

Lot-Sample #...: A9H210223-003 Work Order #...: LJKHJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.31 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.34 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-60

GC/MS Volatiles

Lot-Sample #....: A9H210223-004 Work Order #....: LJKHM1AA Matrix.....: WG
 Date Sampled....: 08/20/09 13:35 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	0.33 J,B	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-60

GC/MS Volatiles

Lot-Sample #...: A9H210223-004 Work Order #...: LJKHM1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	82	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-61

GC/MS Volatiles

Lot-Sample #....: A9H210223-005 Work Order #....: LJKHP1AA Matrix.....: WG
 Date Sampled....: 08/20/09 15:40 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-61

GC/MS Volatiles

Lot-Sample #...: A9H210223-005 Work Order #...: LJKHP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	2.7	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.59 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.80 J	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
Toluene-d8	87	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-62

GC/MS Volatiles

Lot-Sample #....: A9H210223-006 Work Order #....: LJKHT1AA Matrix.....: WG
 Date Sampled....: 08/20/09 16:55 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-62

GC/MS Volatiles

Lot-Sample #...: A9H210223-006 Work Order #...: LJKHT1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.72 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.89 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.3	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	95	(73 - 122)	
1,2-Dichloroethane-d4	96	(61 - 128)	
Toluene-d8	91	(76 - 110)	
4-Bromofluorobenzene	82	(74 - 116)	

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-63

GC/MS Volatiles

Lot-Sample #....: A9H210223-007 Work Order #....: LJKHW1AA Matrix.....: WG
 Date Sampled....: 08/20/09 17:00 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #....: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-082009-JL-63

GC/MS Volatiles

Lot-Sample #...: A9H210223-007 Work Order #...: LJKHW1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.75 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	1.0	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.4	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	88	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

NOTE(S) :

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIPBLANK

GC/MS Volatiles

Lot-Sample #...: A9H210223-008 Work Order #...: LJKH11AA Matrix.....: WQ
 Date Sampled...: 08/20/09 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #...: 9242055
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	2.4 J	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIPBLANK

GC/MS Volatiles

Lot-Sample #...: A9H210223-008 Work Order #...: LJKH11AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Dibromofluoromethane	95	(73 - 122)	
1,2-Dichloroethane-d4	96	(61 - 128)	
Toluene-d8	91	(76 - 110)	
4-Bromofluorobenzene	83	(74 - 116)	

NOTE (S) :

J Estimated result. Result is less than RL.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9H210223
 MB Lot-Sample #: A9H300000-055

Work Order #...: LJ29H1AA

Matrix.....: WATER

Analysis Date...: 08/27/09

Prep Date.....: 08/27/09

Prep Batch #...: 9242055

Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Cyclohexane	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	10	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
Methyl acetate	ND	10	ug/L	SW846 8260B
Methylene chloride	0.50 J	1.0	ug/L	SW846 8260B
Methylcyclohexane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9H210223

Work Order #...: LJ29H1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	92	(73 - 122)
1,2-Dichloroethane-d4	96	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	86	(74 - 116)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9H210223 Work Order #...: LJ29H1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A9H300000-055 LJ29H1AD-LCSD
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #...: 9242055
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	104	(80 - 116)			SW846 8260B
	102	(80 - 116)	1.1	(0-20)	SW846 8260B
Chlorobenzene	109	(76 - 117)			SW846 8260B
	107	(76 - 117)	2.0	(0-20)	SW846 8260B
1,1-Dichloroethene	108	(63 - 130)			SW846 8260B
	106	(63 - 130)	1.4	(0-20)	SW846 8260B
Toluene	110	(74 - 119)			SW846 8260B
	108	(74 - 119)	1.8	(0-20)	SW846 8260B
Trichloroethene	104	(75 - 122)			SW846 8260B
	104	(75 - 122)	0.44	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(73 - 122)
	91	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	90	(61 - 128)
Toluene-d8	93	(76 - 110)
	92	(76 - 110)
4-Bromofluorobenzene	93	(74 - 116)
	92	(74 - 116)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9H210223 Work Order #...: LJKHJ1AC-MS Matrix.....: WG
 MS Lot-Sample #: A9H210223-003 LJKHJ1AD-MSD
 Date Sampled...: 08/20/09 13:25 Date Received...: 08/21/09
 Prep Date.....: 08/27/09 Analysis Date...: 08/27/09
 Prep Batch #...: 9242055
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	102	(78 - 118)			SW846 8260B
	98	(78 - 118)	3.4	(0-20)	SW846 8260B
Chlorobenzene	105	(76 - 117)			SW846 8260B
	103	(76 - 117)	2.3	(0-20)	SW846 8260B
1,1-Dichloroethene	105	(62 - 130)			SW846 8260B
	108	(62 - 130)	2.8	(0-20)	SW846 8260B
Toluene	105	(70 - 119)			SW846 8260B
	103	(70 - 119)	2.0	(0-20)	SW846 8260B
Trichloroethene	104	(62 - 130)			SW846 8260B
	104	(62 - 130)	0.39	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	90	(61 - 128)
	92	(61 - 128)
Toluene-d8	92	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	91	(74 - 116)
	95	(74 - 116)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

**CONESTOGA-ROVERS & ASSOCIATES**

8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO
(Laboratory Name):

Standard TAT

REFERENCE NUMBER:

03481

PROJECT NAME:

Test America - North Coast

PARAMETERS

Evergreen Woods

REMARKS

CHAIN-OF-CUSTODY RECORD

SAMPLER'S
SIGNATURE:

Julie Duguez

PRINTED
NAME:

Julie Livzick

SEQ.
No.

DATE

TIME

SAMPLE IDENTIFICATION No.

SAMPLE
MATRIX

No. OF
CONTAINERS

PARAMETERS

REMARKS

8/22/09

1030

1155

GM-088009-JL-57

W

3

X

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29030

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A9H210223

Client CRA Project Evergreen Mine By: [Signature]
 Cooler Received on 8/21/04 Opened on 8/21/04 (Signature)

FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐
 TestAmerica Cooler # K586 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ☐

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
 If YES, Quantity _____ Quantity Unsalvageable _____
 Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
 Were custody seals on the bottle(s)? Yes ☐ No ☒
 If YES, are there any exceptions? _____

2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
 3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
 4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐

5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other _____
 6. Cooler temperature upon receipt 2.9 °C See back of form for multiple coolers/temps ☐

METHOD: IR ☒ Other ☐
 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
 8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
 9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
 10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
 11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
 12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
 13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
 Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample
 Receiving to meet recommended pH level(s). Nitric Acid Lot# 031909-HNO₃; Sulfuric Acid Lot# 100108-H₂SO₄; Sodium Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-(CH₃COO)₂ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

North Canton Facility

[illegible]

END OF REPORT

ANALYTICAL REPORT

PROJECT NO. 34891

EVERGREEN MANOR

Lot #: A9L040478

Julie Czech

Conestoga-Rovers & Associates,
11004 East 51st Street
Tulsa, OK 74146

TESTAMERICA LABORATORIES, INC.


Designee for

Alesia M. Danford
Project Manager
alesia.danford@testamericainc.com

Approved for release.
Amy McCormick
Project Manager
12/17/2009 1:53 PM

December 17, 2009

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com



CASE NARRATIVE

A9L040478

The following report contains the analytical results for seven water samples and one quality control sample submitted to TestAmerica North Canton by Conestoga-Rovers & Associates, Inc. from the Evergreen Manor Site, project number 34891. The samples were received December 04, 2009, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Julie Czech on December 15, 2009. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Alesia M. Danford, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.2°C.

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada
(#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY,
ARMY, USDA Soil Permit

N:\QAQC\Customer Service\Narrative - Combined RCRA_CWA 032609.doc

EXECUTIVE SUMMARY - Detection Highlights

A9L040478

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-120309-JK-64 12/03/09 09:15 001				
Tetrachloroethene	2.8	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.84 J	1.0	ug/L	SW846 8260B
GW-120309-JK-65 12/03/09 10:40 002				
Tetrachloroethene	0.33 J	1.0	ug/L	SW846 8260B
GW-120309-JK-66 12/03/09 12:25 003				
Tetrachloroethene	0.31 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.34 J	1.0	ug/L	SW846 8260B
GW-120309-JK-67 12/03/09 12:45 004				
Chloroform	0.24 J	1.0	ug/L	SW846 8260B
GW-120309-JK-68 12/03/09 14:25 005				
Tetrachloroethene	2.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.61 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.84 J	1.0	ug/L	SW846 8260B
GW-120309-JK-69 12/03/09 15:35 006				
cis-1,2-Dichloroethene	0.21 J	1.0	ug/L	SW846 8260B
Tetrachloroethene	0.62 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.90 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.2	1.0	ug/L	SW846 8260B
GW-120309-JK-70 12/03/09 15:40 007				
Tetrachloroethene	0.63 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.92 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.3	1.0	ug/L	SW846 8260B
TRIP BLANK 12/03/09 008				
Acetone	4.7 J	10	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A9L040478

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9L040478

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LQH66	001	GW-120309-JK-64	12/03/09	09:15
LQH7L	002	GW-120309-JK-65	12/03/09	10:40
LQH7N	003	GW-120309-JK-66	12/03/09	12:25
LQH7Q	004	GW-120309-JK-67	12/03/09	12:45
LQH7T	005	GW-120309-JK-68	12/03/09	14:25
LQH70	006	GW-120309-JK-69	12/03/09	15:35
LQH71	007	GW-120309-JK-70	12/03/09	15:40
LQH72	008	TRIP BLANK	12/03/09	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-64

GC/MS Volatiles

Lot-Sample #...: A9L040478-001 Work Order #...: LQH661AA Matrix.....: WG
 Date Sampled...: 12/03/09 09:15 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-64

GC/MS Volatiles

Lot-Sample #...: A9L040478-001 Work Order #...: LQH661AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	2.8	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.84 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-65

GC/MS Volatiles

Lot-Sample #...: A9L040478-002 Work Order #...: LQH7L1AA Matrix.....: WG
 Date Sampled...: 12/03/09 10:40 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-65

GC/MS Volatiles

Lot-Sample #...: A9L040478-002 Work Order #...: LQH7L1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Tetrachloroethene	0.33 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	98		(73 - 122)	
1,2-Dichloroethane-d4	99		(61 - 128)	
Toluene-d8	89		(76 - 110)	
4-Bromofluorobenzene	81		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-66

GC/MS Volatiles

Lot-Sample #...: A9L040478-003 Work Order #...: LQH7N1AA Matrix.....: WG
 Date Sampled...: 12/03/09 12:25 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-66

GC/MS Volatiles

Lot-Sample #...: A9L040478-003 Work Order #...: LQH7N1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.31 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.34 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	99	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	79	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-67

GC/MS Volatiles

Lot-Sample #...: A9L040478-004 Work Order #...: LQH7Q1AA Matrix.....: WG
 Date Sampled...: 12/03/09 12:45 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	0.24 J	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-67

GC/MS Volatiles

Lot-Sample #...: A9L040478-004 Work Order #...: LQH7Q1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	96		(73 - 122)	
1,2-Dichloroethane-d4	94		(61 - 128)	
Toluene-d8	91		(76 - 110)	
4-Bromofluorobenzene	83		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-68

GC/MS Volatiles

Lot-Sample #...: A9L040478-005 Work Order #...: LQH7T1AA Matrix.....: WG
 Date Sampled...: 12/03/09 14:25 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-68

GC/MS Volatiles

Lot-Sample #...: A9L040478-005 Work Order #...: LQH7T1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	2.3	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.61 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	0.84 J	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
1,2-Dichloroethane-d4	100	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	80	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-69

GC/MS Volatiles

Lot-Sample #...: A9L040478-006 Work Order #...: LQH701AA Matrix.....: WG
 Date Sampled...: 12/03/09 15:35 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	0.21 J	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-69

GC/MS Volatiles

Lot-Sample #...: A9L040478-006 Work Order #...: LQH701AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Tetrachloroethene	0.62 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.90 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.2	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	91	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-70

GC/MS Volatiles

Lot-Sample #...: A9L040478-007 Work Order #...: LQH711AA Matrix.....: WG
 Date Sampled...: 12/03/09 15:40 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	ND	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-120309-JK-70

GC/MS Volatiles

Lot-Sample #...: A9L040478-007 Work Order #...: LQH711AA Matrix.....: WG

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Tetrachloroethene	0.63 J	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	0.92 J	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	2.3	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
Toluene-d8	89	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A9L040478-008 Work Order #...: LQH721AA Matrix.....: WQ
 Date Sampled...: 12/03/09 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acetone	4.7 J	10	ug/L
Benzene	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
2-Butanone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
Cyclohexane	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
2-Hexanone	ND	10	ug/L
Isopropylbenzene	ND	1.0	ug/L
Methyl acetate	ND	10	ug/L
Methylene chloride	ND	1.0	ug/L
Methylcyclohexane	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	10	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
Styrene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L

(Continued on next page)

Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A9L040478-008 Work Order #...: LQH721AA Matrix.....: WQ

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,2,4-Trichloro- benzene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>		<u>RECOVERY</u>
	<u>RECOVERY</u>		<u>LIMITS</u>
Dibromofluoromethane	97		(73 - 122)
1,2-Dichloroethane-d4	98		(61 - 128)
Toluene-d8	90		(76 - 110)
4-Bromofluorobenzene	83		(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9L040478
MB Lot-Sample #: A9L100000-361

Work Order #...: LQVQN1AA

Matrix.....: WATER

Prep Date.....: 12/10/09

Analysis Date...: 12/10/09

Prep Batch #...: 9344361

Dilution Factor: 1

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	10	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	1.0	ug/L	SW846	8260B
2-Butanone	ND	10	ug/L	SW846	8260B
Carbon disulfide	ND	1.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	1.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
Chloromethane	ND	1.0	ug/L	SW846	8260B
Cyclohexane	ND	1.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	SW846	8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	10	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
Methyl acetate	ND	10	ug/L	SW846	8260B
Methylene chloride	0.43 J	1.0	ug/L	SW846	8260B
Methylcyclohexane	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	10	ug/L	SW846	8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A9L040478

Work Order #...: LQVQN1AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	96	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
Toluene-d8	90	(76 - 110)
4-Bromofluorobenzene	83	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9L040478 Work Order #...: LQVQN1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A9L100000-361 LQVQN1AD-LCSD
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Benzene	96	(80 - 116)			SW846 8260B
	95	(80 - 116)	1.2	(0-20)	SW846 8260B
Chlorobenzene	95	(76 - 117)			SW846 8260B
	95	(76 - 117)	0.12	(0-20)	SW846 8260B
1,1-Dichloroethene	104	(63 - 130)			SW846 8260B
	102	(63 - 130)	1.9	(0-20)	SW846 8260B
Toluene	96	(74 - 119)			SW846 8260B
	97	(74 - 119)	0.54	(0-20)	SW846 8260B
Trichloroethene	96	(75 - 122)			SW846 8260B
	96	(75 - 122)	0.74	(0-20)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	96	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A9L040478 Work Order #...: LQVQN1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A9L100000-361 LQVQN1AD-LCSD
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10	9.6	ug/L	96		SW846 8260B
	10	9.5	ug/L	95	1.2	SW846 8260B
Chlorobenzene	10	9.5	ug/L	95		SW846 8260B
	10	9.5	ug/L	95	0.12	SW846 8260B
1,1-Dichloroethene	10	10	ug/L	104		SW846 8260B
	10	10	ug/L	102	1.9	SW846 8260B
Toluene	10	9.6	ug/L	96		SW846 8260B
	10	9.7	ug/L	97	0.54	SW846 8260B
Trichloroethene	10	9.6	ug/L	96		SW846 8260B
	10	9.6	ug/L	96	0.74	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	94	(73 - 122)
1,2-Dichloroethane-d4	92	(61 - 128)
	96	(61 - 128)
Toluene-d8	95	(76 - 110)
	96	(76 - 110)
4-Bromofluorobenzene	97	(74 - 116)
	100	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A9L040478 Work Order #...: LQH7N1AC-MS Matrix.....: WG
 MS Lot-Sample #: A9L040478-003 LQH7N1AD-MSD
 Date Sampled...: 12/03/09 12:25 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	91	(78 - 118)			SW846 8260B
	95	(78 - 118)	3.5	(0-20)	SW846 8260B
Chlorobenzene	90	(76 - 117)			SW846 8260B
	92	(76 - 117)	2.6	(0-20)	SW846 8260B
1,1-Dichloroethene	102	(62 - 130)			SW846 8260B
	101	(62 - 130)	0.62	(0-20)	SW846 8260B
Toluene	92	(70 - 119)			SW846 8260B
	93	(70 - 119)	1.6	(0-20)	SW846 8260B
Trichloroethene	91	(62 - 130)			SW846 8260B
	94	(62 - 130)	3.5	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	90	(61 - 128)
Toluene-d8	96	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: A9L040478 Work Order #...: LQH7N1AC-MS Matrix.....: WG
 MS Lot-Sample #: A9L040478-003 LQH7N1AD-MSD
 Date Sampled...: 12/03/09 12:25 Date Received...: 12/04/09
 Prep Date.....: 12/10/09 Analysis Date...: 12/10/09
 Prep Batch #...: 9344361
 Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.5	ug/L	95	3.5	SW846 8260B
Chlorobenzene	ND	10	9.0	ug/L	90		SW846 8260B
	ND	10	9.2	ug/L	92	2.6	SW846 8260B
1,1-Dichloroethene	ND	10	10	ug/L	102		SW846 8260B
	ND	10	10	ug/L	101	0.62	SW846 8260B
Toluene	ND	10	9.2	ug/L	92		SW846 8260B
	ND	10	9.3	ug/L	93	1.6	SW846 8260B
Trichloroethene	ND	10	9.1	ug/L	91		SW846 8260B
	ND	10	9.4	ug/L	94	3.5	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(73 - 122)
	96	(73 - 122)
1,2-Dichloroethane-d4	94	(61 - 128)
	90	(61 - 128)
Toluene-d8	96	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	99	(74 - 116)
	98	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

CHAIN-OF-CUSTODY RECORD

(Laboratory Name):

34891

Evergreen Hardor

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Julie Lutzsich PRINTED NAME: Julie Lutzsich

PRINTED NAME: Julie Luzsich

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.
----------	------	------	---------------------------

SAMPLE MATRIX

No. OF
CONTAINERS

PARAMETERS

REMARKS

Herod

107	105	107	105	107	105	107	105
3	3	3	3	3	3	3	3
W	W	W	W	W	W	W	W
X	X	X	X	X	X	X	X

Top Blank

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY:

DATE: 12/3/07

RECEIVED BY:

DATE: _____
TIME: _____

RELINQUISHED BY:

DATE:

RECEIVED BY:

DATE: _____

2 _____
PUBLISHED BY _____

DATE _____

RECEIVED BY:

DATE: _____

METHOD OF SHIPMENT: *FOAEX*

AIR BILL No. 86038 3786 0449 0815

White
-Fully Executed Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

Yellow
-Receiving Laboratory Copy

10

OK

Pink
-Shipper Copy

12/10/1

DATE: 12-1 TIME: 843

Goldenrod -Sampler Copy

July 1

DATE: 10-7-01 TIME: 170

1001-00(SOURCE)GN-C0004

TestAmerica Cooler Receipt Form/Narrative

 Lot Number: A9104078
North Canton Facility

 Client CRA Project Evergreen Manor By: [Signature]
 Cooler Received on 12-4-09 Opened on 12-4-09 (Signature)

 FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐
 TestAmerica Cooler # A291 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ☐

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒
 If YES, Quantity _____ Quantity Unsalvageable _____
 Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒
 Were custody seals on the bottle(s)? Yes ☐ No ☒
 If YES, are there any exceptions? _____
 2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
 3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
 4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
 5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
 6. Cooler temperature upon receipt 2.2 °C See back of form for multiple coolers/temps ☐
 METHOD: IR ☒ Other ☐
 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
 7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
 8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
 9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
 10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
 11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
 12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
 13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒
- Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
 Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample
 Receiving to meet recommended pH level(s). Nitric Acid Lot# 031909-HNO₃; Sulfuric Acid Lot# 082509-H₂SO₄; Sodium
 Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-
 (CH₃COO)₂ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

Discrepancies Cont'd:

END OF REPORT

ANALYTICAL REPORT

PROJECT NO. 34891

EVERGREEN MANOR

Lot #: A0C050473

Julie Czech

Conestoga-Rovers & Associates,
11004 East 51st Street
Tulsa, OK 74146

TESTAMERICA LABORATORIES, INC.



Approved for release.
Amy McCormick
Project Manager
3/16/2010 1:50 PM

Amy L. McCormick
Project Manager
amy.mccormick@testamericainc.com

March 15, 2010

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com



CASE NARRATIVE

A0C050473

The following report contains the analytical results for seven water samples and one quality control sample submitted to TestAmerica North Canton by Conestoga-Rovers & Associates, Inc. from the Evergreen Manor Site, project number 34891. The samples were received March 05, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Julie Czech on March 12, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.3°C.

CASE NARRATIVE (continued)

GC/MS VOLATILES

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "B". All target analytes in the Method Blank must be below the reporting limit (RL) or the associated sample(s) must be ND with the exception of common laboratory contaminants.

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada
(#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY,
ARMY, USDA Soil Permit

EXECUTIVE SUMMARY - Detection Highlights

A0C050473

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
GW-030410-JL-71 03/04/10 09:10 001				
Tetrachloroethene	2.3	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	1.6	1.0	ug/L	SW846 8260B
GW-030410-JL-72 03/04/10 10:25 002				
1,1,1-Trichloroethane	0.29 J	1.0	ug/L	SW846 8260B
GW-030410-JL-73 03/04/10 11:35 003				
Tetrachloroethene	0.37 J	1.0	ug/L	SW846 8260B
GW-030410-JL-74 03/04/10 11:55 004				
Methylene chloride	0.69 J,B	1.0	ug/L	SW846 8260B
GW-030410-JL-75 03/04/10 13:45 005				
Tetrachloroethene	2.5	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.58 J	1.0	ug/L	SW846 8260B
Trichloroethene	0.83 J	1.0	ug/L	SW846 8260B
GW-030410-JL-76 03/04/10 15:20 006				
Tetrachloroethene	0.63 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.91 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.1	1.0	ug/L	SW846 8260B
GW-030410-JL-77 03/04/10 15:30 007				
Tetrachloroethene	0.65 J	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	0.89 J	1.0	ug/L	SW846 8260B
Trichloroethene	2.2	1.0	ug/L	SW846 8260B
TRIP BLANK 03/04/10 008				
Methylene chloride	0.50 J,B	1.0	ug/L	SW846 8260B

ANALYTICAL METHODS SUMMARY

A0C050473

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Volatile Organics by GC/MS	SW846 8260B

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0C050473

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LWCJF	001	GW-030410-JL-71	03/04/10	09:10
LWCJJ	002	GW-030410-JL-72	03/04/10	10:25
LWCJL	003	GW-030410-JL-73	03/04/10	11:35
LWCJN	004	GW-030410-JL-74	03/04/10	11:55
LWCJP	005	GW-030410-JL-75	03/04/10	13:45
LWCJQ	006	GW-030410-JL-76	03/04/10	15:20
LWCJR	007	GW-030410-JL-77	03/04/10	15:30
LWCJT	008	TRIP BLANK	03/04/10	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-71

GC/MS Volatiles

Lot-Sample #...: A0C050473-001 Work Order #...: LWCJF1AA Matrix.....: WG
 Date Sampled...: 03/04/10 09:10 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-71

GC/MS Volatiles

Lot-Sample #...: A0C050473-001 Work Order #...: LWCJF1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Tetrachloroethene	2.3	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	1.6	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	105		(73 - 122)	
1,2-Dichloroethane-d4	102		(61 - 128)	
Toluene-d8	93		(76 - 110)	
4-Bromofluorobenzene	78		(74 - 116)	

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-72

GC/MS Volatiles

Lot-Sample #...: A0C050473-002 Work Order #...: LWCJJ1AA Matrix.....: WG
 Date Sampled...: 03/04/10 10:25 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-72

GC/MS Volatiles

Lot-Sample #...: A0C050473-002 Work Order #...: LWCJJ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	0.29 J	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28

SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	104		(73 - 122)	
1,2-Dichloroethane-d4	98		(61 - 128)	
Toluene-d8	89		(76 - 110)	
4-Bromofluorobenzene	75		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-73

GC/MS Volatiles

Lot-Sample #...: A0C050473-003 Work Order #...: LWCJL1AA Matrix.....: WG
 Date Sampled...: 03/04/10 11:35 Date Received...: 03/05/10
 Prep Date.....: 03/09/10 Analysis Date...: 03/09/10
 Prep Batch #...: 0071154
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-73

GC/MS Volatiles

Lot-Sample #...: A0C050473-003 Work Order #...: LWCJL1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Tetrachloroethene	0.37 J	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	100		(73 - 122)	
1,2-Dichloroethane-d4	88		(61 - 128)	
Toluene-d8	93		(76 - 110)	
4-Bromofluorobenzene	74		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-74

GC/MS Volatiles

Lot-Sample #...: A0C050473-004 Work Order #...: LWCJN1AA Matrix.....: WG
 Date Sampled...: 03/04/10 11:55 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	0.69 J,B	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-74

GC/MS Volatiles

Lot-Sample #...: A0C050473-004 Work Order #...: LWCJN1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28

SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	103		(73 - 122)	
1,2-Dichloroethane-d4	99		(61 - 128)	
Toluene-d8	93		(76 - 110)	
4-Bromofluorobenzene	76		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-75

GC/MS Volatiles

Lot-Sample #...: A0C050473-005 Work Order #...: LWCJP1AA Matrix.....: WG
 Date Sampled...: 03/04/10 13:45 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-75

GC/MS Volatiles

Lot-Sample #...: A0C050473-005 Work Order #...: LWCJP1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tetrachloroethene	2.5	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	0.58 J	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	0.83 J	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	110	(73 - 122)		
1,2-Dichloroethane-d4	101	(61 - 128)		
Toluene-d8	94	(76 - 110)		
4-Bromofluorobenzene	75	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-76

GC/MS Volatiles

Lot-Sample #...: A0C050473-006 Work Order #...: LWCJQ1AA Matrix.....: WG
 Date Sampled...: 03/04/10 15:20 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-76

GC/MS Volatiles

Lot-Sample #...: A0C050473-006 Work Order #...: LWCJQ1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tetrachloroethene	0.63 J	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	0.91 J	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	2.1	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Dibromofluoromethane	102	(73 - 122)		
1,2-Dichloroethane-d4	99	(61 - 128)		
Toluene-d8	90	(76 - 110)		
4-Bromofluorobenzene	75	(74 - 116)		

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-77

GC/MS Volatiles

Lot-Sample #...: A0C050473-007 Work Order #...: LWCJR1AA Matrix.....: WG
 Date Sampled...: 03/04/10 15:30 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	ND	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: GW-030410-JL-77

GC/MS Volatiles

Lot-Sample #...: A0C050473-007 Work Order #...: LWCJR1AA Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tetrachloroethene	0.65 J	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	0.89 J	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	2.2	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(73 - 122)
1,2-Dichloroethane-d4	97	(61 - 128)
Toluene-d8	94	(76 - 110)
4-Bromofluorobenzene	77	(74 - 116)

NOTE(S):

J Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0C050473-008 Work Order #...: LWCJT1AA Matrix.....: WQ
 Date Sampled...: 03/04/10 Date Received..: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date..: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	1.1
Benzene	ND	1.0	ug/L	0.13
Bromodichloromethane	ND	1.0	ug/L	0.15
Bromoform	ND	1.0	ug/L	0.64
Bromomethane	ND	1.0	ug/L	0.41
2-Butanone	ND	10	ug/L	0.57
Carbon disulfide	ND	1.0	ug/L	0.13
Carbon tetrachloride	ND	1.0	ug/L	0.13
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroethane	ND	1.0	ug/L	0.29
Chloroform	ND	1.0	ug/L	0.16
Chloromethane	ND	1.0	ug/L	0.30
Cyclohexane	ND	1.0	ug/L	0.12
Dibromochloromethane	ND	1.0	ug/L	0.18
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	0.67
1,2-Dibromoethane	ND	1.0	ug/L	0.24
1,2-Dichlorobenzene	ND	1.0	ug/L	0.13
1,3-Dichlorobenzene	ND	1.0	ug/L	0.14
1,4-Dichlorobenzene	ND	1.0	ug/L	0.13
Dichlorodifluoromethane	ND	1.0	ug/L	0.31
1,1-Dichloroethane	ND	1.0	ug/L	0.15
1,2-Dichloroethane	ND	1.0	ug/L	0.22
1,1-Dichloroethene	ND	1.0	ug/L	0.19
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.17
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.19
1,2-Dichloropropane	ND	1.0	ug/L	0.18
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.14
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.19
Ethylbenzene	ND	1.0	ug/L	0.17
2-Hexanone	ND	10	ug/L	0.41
Isopropylbenzene	ND	1.0	ug/L	0.13
Methyl acetate	ND	10	ug/L	0.38
Methylene chloride	0.50 J,B	1.0	ug/L	0.33
Methylcyclohexane	ND	1.0	ug/L	0.13
4-Methyl-2-pentanone	ND	10	ug/L	0.32
Methyl tert-butyl ether	ND	5.0	ug/L	0.17
Styrene	ND	1.0	ug/L	0.11
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.18

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Conestoga-Rovers & Associates, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: A0C050473-008 Work Order #...: LWCJT1AA Matrix.....: WQ

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Tetrachloroethene	ND	1.0	ug/L	0.29
Toluene	ND	1.0	ug/L	0.13
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.15
1,1,1-Trichloroethane	ND	1.0	ug/L	0.22
1,1,2-Trichloroethane	ND	1.0	ug/L	0.27
Trichloroethene	ND	1.0	ug/L	0.17
Trichlorofluoromethane	ND	1.0	ug/L	0.21
1,1,2-Trichloro- 1,2,2-trifluoroethane	ND	1.0	ug/L	0.28
Vinyl chloride	ND	1.0	ug/L	0.22
Xylenes (total)	ND	2.0	ug/L	0.28

SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
Dibromofluoromethane	107		(73 - 122)	
1,2-Dichloroethane-d4	100		(61 - 128)	
Toluene-d8	94		(76 - 110)	
4-Bromofluorobenzene	76		(74 - 116)	

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

QUALITY CONTROL SECTION

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0C050473
MB Lot-Sample #: A0C090000-118

Work Order #...: LWE121AA

Matrix.....: WATER

Analysis Date...: 03/08/10

Prep Date.....: 03/08/10

Prep Batch #...: 0068118

Dilution Factor: 1

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	10	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	1.0	ug/L	SW846	8260B
2-Butanone	ND	10	ug/L	SW846	8260B
Carbon disulfide	ND	1.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	1.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
Chloromethane	ND	1.0	ug/L	SW846	8260B
Cyclohexane	ND	1.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	SW846	8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	10	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
Methyl acetate	ND	10	ug/L	SW846	8260B
Methylene chloride	0.51 J	1.0	ug/L	SW846	8260B
Methylcyclohexane	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	10	ug/L	SW846	8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0C050473

Work Order #...: LWE121AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	98	(73 - 122)
1,2-Dichloroethane-d4	105	(61 - 128)
Toluene-d8	97	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0C050473
MB Lot-Sample #: A0C120000-154

Work Order #...: LWKX51AA

Matrix.....: WATER

Prep Date.....: 03/09/10

Analysis Date...: 03/09/10

Prep Batch #...: 0071154

Dilution Factor: 1

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
Acetone	ND	10	ug/L	SW846	8260B
Benzene	ND	1.0	ug/L	SW846	8260B
Bromodichloromethane	ND	1.0	ug/L	SW846	8260B
Bromoform	ND	1.0	ug/L	SW846	8260B
Bromomethane	ND	1.0	ug/L	SW846	8260B
2-Butanone	ND	10	ug/L	SW846	8260B
Carbon disulfide	ND	1.0	ug/L	SW846	8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846	8260B
Chlorobenzene	ND	1.0	ug/L	SW846	8260B
Chloroethane	ND	1.0	ug/L	SW846	8260B
Chloroform	ND	1.0	ug/L	SW846	8260B
Chloromethane	ND	1.0	ug/L	SW846	8260B
Cyclohexane	ND	1.0	ug/L	SW846	8260B
Dibromochloromethane	ND	1.0	ug/L	SW846	8260B
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	SW846	8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
2-Hexanone	ND	10	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
Methyl acetate	ND	10	ug/L	SW846	8260B
Methylene chloride	0.48 J	1.0	ug/L	SW846	8260B
Methylcyclohexane	ND	1.0	ug/L	SW846	8260B
4-Methyl-2-pentanone	ND	10	ug/L	SW846	8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A0C050473

Work Order #...: LWKX51AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	99	(73 - 122)
1,2-Dichloroethane-d4	85	(61 - 128)
Toluene-d8	92	(76 - 110)
4-Bromofluorobenzene	81	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0C050473 Work Order #...: LWE121AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A0C090000-118 LWE121AD-LCSD
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	100	(80 - 116)			SW846 8260B
	104	(80 - 116)	4.0	(0-20)	SW846 8260B
Chlorobenzene	95	(76 - 117)			SW846 8260B
	96	(76 - 117)	0.97	(0-20)	SW846 8260B
1,1-Dichloroethene	110	(63 - 130)			SW846 8260B
	116	(63 - 130)	5.3	(0-20)	SW846 8260B
Toluene	97	(74 - 119)			SW846 8260B
	99	(74 - 119)	1.5	(0-20)	SW846 8260B
Trichloroethene	90	(75 - 122)			SW846 8260B
	95	(75 - 122)	6.0	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	95	(73 - 122)
1,2-Dichloroethane-d4	101	(61 - 128)
	100	(61 - 128)
Toluene-d8	99	(76 - 110)
	95	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0C050473 Work Order #...: LWKX51AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: A0C120000-154 LWKX51AD-LCSD
 Prep Date.....: 03/09/10 Analysis Date...: 03/09/10
 Prep Batch #...: 0071154
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	94	(80 - 116)			SW846 8260B
	98	(80 - 116)	4.2	(0-20)	SW846 8260B
Chlorobenzene	87	(76 - 117)			SW846 8260B
	93	(76 - 117)	6.6	(0-20)	SW846 8260B
1,1-Dichloroethene	113	(63 - 130)			SW846 8260B
	119	(63 - 130)	5.4	(0-20)	SW846 8260B
Toluene	89	(74 - 119)			SW846 8260B
	95	(74 - 119)	6.4	(0-20)	SW846 8260B
Trichloroethene	88	(75 - 122)			SW846 8260B
	94	(75 - 122)	6.9	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(73 - 122)
	95	(73 - 122)
1,2-Dichloroethane-d4	86	(61 - 128)
	84	(61 - 128)
Toluene-d8	96	(76 - 110)
	94	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	90	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0C050473 Work Order #...: LWCJJ1AC-MS Matrix.....: WG
 MS Lot-Sample #: A0C050473-002 LWCJJ1AD-MSD
 Date Sampled...: 03/04/10 10:25 Date Received...: 03/05/10
 Prep Date.....: 03/08/10 Analysis Date...: 03/08/10
 Prep Batch #...: 0068118
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	104	(78 - 118)			SW846 8260B
	101	(78 - 118)	2.1	(0-20)	SW846 8260B
Chlorobenzene	94	(76 - 117)			SW846 8260B
	95	(76 - 117)	1.4	(0-20)	SW846 8260B
1,1-Dichloroethene	124	(62 - 130)			SW846 8260B
	122	(62 - 130)	1.3	(0-20)	SW846 8260B
Toluene	96	(70 - 119)			SW846 8260B
	98	(70 - 119)	1.7	(0-20)	SW846 8260B
Trichloroethene	98	(62 - 130)			SW846 8260B
	95	(62 - 130)	2.8	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	106	(73 - 122)
	98	(73 - 122)
1,2-Dichloroethane-d4	95	(61 - 128)
	94	(61 - 128)
Toluene-d8	100	(76 - 110)
	99	(76 - 110)
4-Bromofluorobenzene	95	(74 - 116)
	94	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A0C050473 Work Order #...: LWCEC1AC-MS Matrix.....: WATER
 MS Lot-Sample #: A0C050456-001 LWCEC1AD-MSD
 Date Sampled...: 03/03/10 08:50 Date Received...: 03/05/10
 Prep Date.....: 03/09/10 Analysis Date...: 03/09/10
 Prep Batch #...: 0071154
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	103	(78 - 118)			SW846 8260B
	100	(78 - 118)	2.4	(0-20)	SW846 8260B
Chlorobenzene	93	(76 - 117)			SW846 8260B
	93	(76 - 117)	0.74	(0-20)	SW846 8260B
1,1-Dichloroethene	121	(62 - 130)			SW846 8260B
	130	(62 - 130)	7.3	(0-20)	SW846 8260B
Toluene	95	(70 - 119)			SW846 8260B
	96	(70 - 119)	0.80	(0-20)	SW846 8260B
Trichloroethene	90	(62 - 130)			SW846 8260B
	90	(62 - 130)	0.17	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(73 - 122)
	99	(73 - 122)
1,2-Dichloroethane-d4	87	(61 - 128)
	88	(61 - 128)
Toluene-d8	95	(76 - 110)
	97	(76 - 110)
4-Bromofluorobenzene	87	(74 - 116)
	92	(74 - 116)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica Cooler Receipt Form/Narrative

 Lot Number: A06050473
North Canton Facility

 Client CRA Project Evans Road By: [Signature] (Signature)

 Cooler Received on 3/5/10 Opened on 3/5/10

 FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐

 TestAmerica Cooler # TA 10 # Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ☐

 1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☒ Intact? Yes ☐ No ☐ NA ☒

If YES, Quantity _____ Quantity Unsalvageable _____

 Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☒

 Were custody seals on the bottle(s)? Yes ☐ No ☒

 If YES, are there any exceptions? _____ Yes ☒ No ☐

 2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐

 3. Did custody papers accompany the sample(s)? Yes ☒ No ☐

 4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐

 5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other ☐

 6. Cooler temperature upon receipt 1.3 °C See back of form for multiple coolers/temps ☐

 METHOD: IR ☒ Other ☐

 COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

 7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐

 8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐

 9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒

 10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐

 11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐

 12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐

 13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

 Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐

Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample

 Receiving to meet recommended pH level(s). Nitric Acid Lot# 121709-HNO₃; Sulfuric Acid Lot# 082509-H₂SO₄; Sodium

Hydroxide Lot# 100108 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-

 (CH₃COO)₂ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

[illegible]

Discrepancies Cont'd.

[illegible]

END OF REPORT

ATTACHMENT B

DATA QUALITY ASSESSMENT AND VALIDATION MEMORANDA



**CONESTOGA-ROVERS
& ASSOCIATES**

8615 W. Bryn Mawr Avenue, Chicago, Illinois 60631
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www.CRAworld.com

MEMORANDUM

TO: Bruce Clegg REF. NO.: 034891
FROM: Dave Hendren/lg/4 *SH* DATE: June 10, 2009
C.C.: Ken Duwal
RE: Data Quality Assessment and Validation for Groundwater Samples Collected at the
Evergreen Manor Site in Roscoe Township, Illinois

The following details the data quality assessment and validation conducted for the seven groundwater samples collected on May 22, 2009 at the Evergreen Manor Site in Roscoe Township, Illinois. The samples identified in Table 1 were analyzed for volatile organic compounds (VOCs) by TestAmerica Laboratories, Inc., of North Canton, Ohio. The samples were analyzed using SW-846 Method 8260B from "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Third Edition, November 1986 and its updates. The quality assurance criteria used to assess the data were established by the method.¹

Holding Time Period

The holding time period for VOC analysis of preserved water samples is 14 days from sample collection to completion of analysis. All samples were properly preserved and all analyses were completed within the holding time period.

Method Blank Sample Data

Method blank sample data were evaluated to verify that analytes detected in the investigative samples were not attributable to laboratory conditions or procedures. As a result of method blank contamination the result for methylcyclohexane in sample GW-052209-JK-051 has been qualified as undetected "U", with a detection limit of 1.0 ug/L.

Surrogate Compound Analyses

Method performance on individual samples was evaluated by the percent recovery data of surrogate compound spikes. The surrogate compound percent recovery data for all samples were acceptable.

Laboratory Control Sample Analyses

Analytical accuracy and precision were evaluated by the percent recovery and relative percent difference (RPD) data from the analysis of duplicate laboratory control samples (also referred to as laboratory fortified

¹ Application of quality assurance evaluation criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

blanks). The duplicate laboratory control sample percent recovery and RPD data were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and RPDs were determined. The MS/MSD percent recovery and RPD data were acceptable.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC measures included the analysis of one field equipment (rinsate) blank sample, one trip blank sample, and one field duplicate sample set.

To monitor the effectiveness of field equipment decontamination procedures a field equipment blank sample was collected and analyzed. There were no target compounds detected in the rinsate blank or qualification of sample data was not required.

To monitor potential sample cross-contamination by VOCs during sample transportation and storage, a trip blank sample was submitted with each cooler containing investigative samples. There were no VOCs detected in the trip blank.

Overall precision for the sampling and analysis event was evaluated by field duplicate sample data. The results of VOCs detected in the field duplicate samples are summarized in Table 2. A RPD of 50% was used as an advisory limit for analytes detected in both the investigative and duplicate samples at concentrations greater than or equal to 5 times the reporting limits. The RPD data indicate that the overall precision of the sampling and analysis event was acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use, with the qualification stated above.

Attachments

TABLE 1

**SAMPLE IDENTIFICATION NUMBERS
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

GW-052209-JK-050
GW-052209-JK-051
GW-052209-JK-052
GW-052209-JK-053
GW-052209-JK-054
GW-052209-JK-055
GW-052209-JK-056

TABLE 2

SUMMARY OF DETECTED ANALYTES FROM FIELD DUPLICATE SAMPLES
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Analyte</i>	<i>Investigative Sample</i> GW-052209-JK-055 (µg/L)	<i>Duplicate Sample</i> GW-052209-JK-056 (µg/L)	<i>RPD</i> ¹	<i>Qualifier</i>
Tetrachloroethene	0.58	0.59	2	None
1,1,1-Trichloroethane	1.0	1.0	0	None
Trichloroethene	2.3	2.3	0	None

¹ RPD - Relative Percent Difference



**CONESTOGA-ROVERS
& ASSOCIATES**

8615 W. Bryn Mawr Avenue, Chicago, Illinois 60631
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MEMORANDUM

TO: Ken Duwal REF. NO.: 034891
FROM: Dave Hendren/lg/5 *lg* *H* DATE: September 8, 2009
RE: **Data Quality Assessment and Validation for Groundwater Samples Collected at the
Evergreen Manor Site in Roscoe Township, Illinois.**

The following details the data quality assessment and validation conducted for the seven groundwater samples collected on August 20, 2009 at the Evergreen Manor Site in Roscoe Township, Illinois. The samples identified in Table 1 were analyzed for volatile organic compounds (VOCs) by TestAmerica Laboratories, Inc., of North Canton, Ohio. The samples were analyzed using SW-846 Method 8260B from "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", Third Edition, November 1986 and its updates. The quality assurance criteria used to assess the data were established by the method.¹

Holding Time Period

The holding time period for VOC analysis of preserved water samples is 14 days from sample collection to completion of analysis. All samples were properly preserved and all analyses were completed within the holding time period.

Method Blank Sample Data

Method blank sample data were evaluated to verify that analytes detected in the investigative samples were not attributable to laboratory conditions or procedures. As a result of method blank contamination the result for methylene chloride in sample GW-082009-JL-60 (a rinsate blank) has been qualified as undetected "U", with a detection limit of 1.0 µg/L. Qualification was not required for any of the investigative samples.

Surrogate Compound Analyses

Method performance on individual samples was evaluated by the percent recovery data of surrogate compound spikes. The surrogate compound percent recovery data for all samples were acceptable.

Laboratory Control Sample Analyses

Analytical accuracy and precision were evaluated by the percent recovery and relative percent difference (RPD) data from the analysis of duplicate laboratory control samples (also referred to as laboratory fortified blanks). The duplicate laboratory control sample percent recovery and RPD data were acceptable.

¹ Application of quality assurance evaluation criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and RPDs were determined. The MS/MSD percent recovery and RPD data were acceptable.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC measures included the analysis of one field equipment (rinsate) blank sample, one trip blank sample, and one field duplicate sample set.

To monitor the effectiveness of field equipment decontamination procedures, a field equipment blank sample was collected and analyzed. There were no target compounds detected in the rinsate blank or qualification of sample data was not required.

To monitor potential sample cross-contamination by VOCs during sample transportation and storage, a trip blank sample was submitted with each cooler containing investigative samples. Acetone was detected in the trip blank, but was not present in any sample, so qualification was not required.

Overall precision for the sampling and analysis event was evaluated by field duplicate sample data. The results of VOCs detected in the field duplicate samples are summarized in Table 2. A RPD of 50% was used as an advisory limit for analytes detected in both the investigative and duplicate samples at concentrations greater than or equal to 5 times the reporting limits. The RPD data indicate that the overall precision of the sampling and analysis event was acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use, with the qualification stated above.

Attachments

TABLE 1

SAMPLE IDENTIFICATION NUMBERS

GROUNDWATER SAMPLES

EVERGREEN MANOR SITE

ROSCOE TOWNSHIP, ILLINOIS

GW-082009-JL-57
GW-082009-JL-58
GW-082009-JL-59
GW-082009-JL-60
GW-082009-JL-61
GW-082009-JL-62
GW-082009-JL-63

TABLE 2

SUMMARY OF DETECTED ANALYTES FROM FIELD DUPLICATE SAMPLES
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Analyte</i>	<i>Investigative Sample GW-082009-JL-62 (µg/L)</i>	<i>Duplicate Sample GW-082009-JL-63 (µg/L)</i>	<i>RPD¹</i>	<i>Qualifier</i>
Tetrachloroethene	0.72	0.75	4	None
1,1,1-Trichloroethane	0.89	1.0	12	None
Trichloroethene	2.3	2.4	4	None


¹ RPD - Relative Percent Difference



**CONESTOGA-ROVERS
& ASSOCIATES**

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MEMORANDUM

TO: Ken Duwal REF. NO.: 034891
FROM: Julie Czech/JC/6  DATE: January 4, 2010
RE: **Data Quality Assessment and Validation for Groundwater Samples Collected at the
Evergreen Manor Site in Roscoe Township, Illinois**

The following details the data quality assessment and validation conducted for the groundwater samples collected on December 3, 2009 at the Evergreen Manor Site in Roscoe Township, Illinois. The samples, identified in Table 1, were analyzed for the parameter listed in Table 2 by TestAmerica Laboratories, Inc., of North Canton, Ohio. The quality assurance criteria used to assess the data were established by the QAPP.¹

Holding Time Period

The holding time period is presented in Table 3. All samples were properly preserved and all analyses were completed within the holding time period.

Method Blank Sample Data

Method blank sample data were evaluated to verify that analytes detected in the investigative samples were not attributable to laboratory conditions or procedures. Methylene chloride was detected in the method blank sample. Data qualification was not required as the analyte was not detected in the associated samples. The remaining method blank sample data were acceptable.

Surrogate Compound Analyses

Method performance on individual samples was evaluated by the percent recovery data of surrogate compound spikes. The surrogate compound percent recovery data for all samples were acceptable.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analyses

The accuracy and precision of the analyses were assessed by the percent recovery and relative percent difference (RPD) data from the LCS/LCSD analyses. The LCS/LCSD percent recovery and RPD data were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and RPDs were determined. The MS/MSD percent recovery and RPD data were acceptable.

¹ Application of quality assurance evaluation criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC analyses associated with these samples consisted of one field equipment blank, one trip blank, and one field duplicate sample set.

To monitor the effectiveness of field equipment decontamination procedures, a field equipment blank sample was collected and analyzed. Chloroform was detected in the field equipment blank sample. Data qualification was not required as the analyte was not detected in the associated samples. The remaining field equipment blank sample data were acceptable.

To monitor potential sample cross-contamination by VOCs during sample transportation and storage, a trip blank sample was submitted with each cooler containing investigative samples. Acetone was detected in the trip blank sample. Data qualification was not required as the analyte was not detected in the associated samples. The remaining trip blank sample data were acceptable.

Overall precision for the sampling and analysis event was evaluated by field duplicate sample data. Table 4 presents the results of analytes detected in the investigative and field duplicate sample. An RPD of 50% was used as an advisory limit for analytes detected in both the investigative and duplicate samples at concentrations greater than or equal to 5 times the reporting limit. The RPD data indicate that the overall precision of the sampling and analysis event was acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use without qualification.

Attachments

TABLE 1
SAMPLE IDENTIFICATION NUMBERS
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

GW-120309-JK-64
GW-120309-JK-65
GW-120309-JK-66
GW-120309-JK-67
GW-120309-JK-68
GW-120309-JK-69
GW-120309-JK-70

TABLE 2

SUMMARY OF ANALYTICAL METHODS
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Parameter</i>	<i>Analytical Method</i> ¹
Volatile Organic Compounds (VOCs)	SW-846 8260A

¹ Methods were referenced from:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, 3rd Edition with promulgated Updates, November 1986.

TABLE 3

HOLDING TIME PERIODS
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Parameter</i>	<i>Holding Time Period</i>
VOCs	- 14 days from sample collection to completion of analysis

TABLE 4

SUMMARY OF DETECTED ANALYTES FROM FIELD DUPLICATE SAMPLES
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Analyte</i>	<i>Investigative Sample GW-120309-JK-69 (µg/L)</i>	<i>Duplicate Sample GW-120309-JK-70 (µg/L)</i>	<i>RPD</i> ¹	<i>Qualifier</i>
cis-1,2-Dichloroethene	0.21 J ²	ND(1.0) ³	NC ⁴	None
Tetrachloroethene	0.62 J	0.63 J	1.6	None
1,1,1-Trichloroethane	0.9 J	0.92 J	2.2	None
Trichloroethene	2.2	2.3	4.4	None

¹ RPD - Relative Percent Difference

² J - Estimated quantity

³ ND - Not Detected


⁴ NC - Not Calculable



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MEMORANDUM

TO: Ken Duwal REF. NO.: 034891
FROM: Julie Czech/JC/7  DATE: March 31, 2010
RE: Data Quality Assessment and Validation for Groundwater Samples Collected at the
Evergreen Manor Site in Roscoe Township, Illinois

The following details the data quality assessment and validation conducted for the groundwater samples collected on March 4, 2010 at the Evergreen Manor Site in Roscoe Township, Illinois. The samples, identified in Table 1, were analyzed for the parameter listed in Table 2 by TestAmerica Laboratories, Inc., of North Canton, Ohio. The quality assurance criteria used to assess the data were established by the QAPP.¹

Holding Time Period

The holding time period is presented in Table 3. One sample cooler was received by the laboratory at a temperature below the lowest temperature specified for sample preservation per the methods. However, since the samples were colder than recommended by the methods, it was deemed that neither data quality was affected nor sample integrity compromised. The remaining sample analyses were completed within the required holding time periods and were collected and preserved properly.

Method Blank Sample Data

Method blank sample data were evaluated to verify that analytes detected in the investigative samples were not attributable to laboratory conditions or procedures. Methylene chloride was detected in the method blank samples. Data qualification was not required as the analyte was not detected in the associated samples. The remaining method blank sample data were acceptable.

Surrogate Compound Analyses

Method performance on individual samples was evaluated by the percent recovery data of surrogate compound spikes. The surrogate compound percent recovery data for all samples were acceptable.

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analyses

The accuracy and precision of the analyses were assessed by the percent recovery and relative percent difference (RPD) data from the LCS/LCSD analyses. The LCS/LCSD percent recovery and RPD data were acceptable.

¹ Application of quality assurance evaluation criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and RPDs were determined. The MS/MSD percent recovery and RPD data were acceptable.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC analyses associated with these samples consisted of one field equipment blank, one trip blank, and one field duplicate sample set.

To monitor the effectiveness of field equipment decontamination procedures, a field equipment blank sample was collected and analyzed. Methylene chloride was detected in the field equipment blank sample. Data qualification was not required as the analyte was not detected in the associated samples. The remaining field equipment blank sample data were acceptable.

To monitor potential sample cross-contamination by VOCs during sample transportation and storage, a trip blank sample was submitted with each cooler containing investigative samples. Methylene chloride was detected in the trip blank sample. Data qualification was not required as the analyte was not detected in the associated samples. The remaining trip blank sample data were acceptable.

Overall precision for the sampling and analysis event was evaluated by field duplicate sample data. Table 4 presents the results of analytes detected in the investigative and field duplicate sample. An RPD of 50% was used as an advisory limit for analytes detected in both the investigative and duplicate samples at concentrations greater than or equal to 5 times the reporting limit. The RPD data indicate that the overall precision of the sampling and analysis event was acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use without qualification.

Attachments

TABLE 1

**SAMPLE IDENTIFICATION NUMBERS
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS**

GW-030410-JL-71
GW-030410-JL-72
GW-030410-JL-73
GW-030410-JL-74
GW-030410-JL-75
GW-030410-JL-76
GW-030410-JL-77

TABLE 2

SUMMARY OF ANALYTICAL METHODS
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Parameter</i>	<i>Analytical Method</i> ¹
Volatile Organic Compounds (VOCs)	SW-846 8260B

¹ Methods were referenced from:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, 3rd Edition with promulgated Updates, November 1986.

TABLE 3

HOLDING TIME PERIODS
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Parameter</i>	<i>Holding Time Period</i>
VOCs	- 14 days from sample collection to completion of analysis

TABLE 4
SUMMARY OF DETECTED ANALYTES FROM FIELD DUPLICATE SAMPLES
GROUNDWATER SAMPLES
EVERGREEN MANOR SITE
ROSCOE TOWNSHIP, ILLINOIS

<i>Analyte</i>	<i>Investigative Sample GW-030410-JL-76 (µg/L)</i>	<i>Duplicate Sample GW-030410-JL-77 (µg/L)</i>	<i>RPD¹</i>	<i>Qualifier</i>
Tetrachloroethene	0.63 J ²	0.65 J	3.1	None
1,1,1-Trichloroethane	0.91 J	0.89 J	2.2	None
Trichloroethene	2.1	2.2	4.7	None

¹ RPD - Relative Percent Difference

² J - Estimated quantity